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ABSTRACT

This study was conducted to provide recommendations necessary for the implementation of a coördinated educational data processing system and to compare operational costs and selected resources in five public junior colleges in Illinois. Possible uses include: (1) identifying students served and services rendered, (2) determining costs for state appropriation requests, (3) developing sound techniques for managing expenditures at the state and local levels, (4) improving the allocation of costs between different programs, and (5) determining the location and number of programs. The system stresses the need for accurate source data identification, efficient data collection and processing, and a common data base for multi-agency use. (BH)

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A SYSTEM MODEL FOR THE COLLECTION, PROCESSING, SUMMARIZATION & COMPARISON OF COURSE COST, ENROLLMENT & REIMBURSEMENT DATA AT THE COMMUNITY COLLEGE LEVEL

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PREFACE

The success with which education meets the needs of the individual and society is largely dependent upon the amount of provided resources. Essential to resource accountability and allocation is a system capable of identifying, assigning, and processing data which may be used for planning and decision-making purposes.

This study provides recommendations necessary for the implementation of a coordinated educational data processing system and, on the basis of available data, provides a comparison of operational costs and selected resources in five publicly supported Illinois junior colleges.

The presented data are limited to operational costs as defined in this study. Resource data are limited to those obtained from the Illinois Division of Vocational and Technical Education, the Illinois Junior College Board, and tuition charges collected by each institution; special fees and laboratory charges are not included. The recommendations for a coordinated educational data processing system, however, have been developed for applicability with some modification at any educational level and a determination of resource accountability by any agency.

The system stresses the need for accurate source data identification, efficient data collection and processing, and the establishment of a common data base for multi-agency use. It is only through such a coordinated approach that accurate data necessary for planning, decision making, and resource allocation can be provided.

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CHAPTER I

INTRODUCTION

Our educational institutions have long been charged with the transmission of culture from one generation to the next and the preparation of individulas for entry into our society. Since the inception of our publicly supported educational system, the provision of financial support and the specification of educational objectives have been the responsibility of the people. This support and control of education carries an inherent responsibility for the accountability of expended resources and a determination of the adequacy with which the education system met stated objectives.

In early times when education was provided for the select few and consisted mostly of the three R's, the accountability of educational expenditures and the evaluation of objectives was a relatively simple task. However, as the responsibilities placed upon the educational system have increased, accountability for expenditures to the services for which they were intended and the evaluation of the services themselves have become increasingly difficult. From the grammar school serving the few in basic academic subjects, the educational system has progressed to multi-level institutions meeting the needs of all people through the offering of many subject areas and experiences.

The necessary public funds for services at various educational institutions are channeled through many agencies at the local, state, and national levels. A single institution, a public junior college for example, receives public monies from at least: (1) its local tax district, (2) the State Board for Junior Colleges, and (3) in the case of occupational programs, the State Division of Vocational and Technical Education. In addition to the above sources, the college may receive additional monies for specific purposes such as providing services to the disadvantaged, handicapped, and unemployed, from the Manpower Administration or the State Division of Rehabilitation.

In many cases the Federal government supplies to state agencies monies which are in turn supplemented by state funds. There are also instances where a single state board is responsible for funding similar services through separately administered divisions under its direction. The Board of Vocational Education and Rehabilitation, responsible for the Division of Vocational and Technical Education and the Division of Vocational Rehabilitation, is such a board.

In addition to the public resources described, private resources are available to education. Such resources include donations to education by corporations or individuals and tuition and/or fees paid directly by or in behalf of individuals receiving educational services. While the above examples are certainly not all inclusive, they serve to illustrate various revenue sources and the complexities encountered in attempting to account for funds to the purposes for which they were intended.

In reality, almost everyone contributes in some amount to education, either directly through tuition, fees or donations, or indirectly through personal and property taxes or even more indirectly via his role in corporation profits which are in turn taxed.

The Increased Role of Education and the Increased Need for Public Funds

Education at all levels is responsible for the preparation of productive individuals able to contribute to our society. As a vehicle transmitting culture, the educational system is constantly being evaluated in terms of the preparation rendered and the amount of resources necessarily consumed. While the welfare and economic well-being of a society have often been used as measures of the adequacy and quality of the society's schools, it appears that the converse is also true. Our country is currently faced with a high rate of unemployment, dissatisfaction with a foreign war, inflation, and the inability to provide an equal standard of living and equal opportunities to all persons regardless of race or national origin. As these societal problems become increasingly severe, the criticism voiced against education becomes increasingly severe, the inadequacy of the schools, therefore, serves as a reflection of the increasing dissatisfaction with society.

Needs for additional and more appropriate educational services equally provided to all persons become apparent. These additional quantitative and qualitative needs as well as the maintenance of current offerings are dependent mostly upon public resources. Unfortunately, current societal problems have created a need for other services which are also in need of public resources. These include environmental protection, health and welfare, and programs for the retarded and those in penal institutions to mention a few. To a large degree, these problems and needs have been brought to the forefront by a more educated society. It seems almost paradoxical that the institution responsible for a greater public sensitivity and awareness finds itself the object of criticism due to this greater sensitivity and awareness and in competition for resources which are to be directed toward the solution of problems which at least indirectly it has helped to identify.

While this study has been devoted to the development of a system concerned with the identification of educational resources, expenditures, services and product produced, and persons served, this brief introduction is provided to establish the relationship of education to other publicly supported services in our society. The educational system has at times been identified as having insatiable needs for increased funds. While additional monies have been required, these monies have brought about new and expanded services to the disadvantaged, handicapped, adults, and the increasing number of students in our educational system. Courses are provided in remedial English and Mathematics for the disadvantaged; physical therapy and vocational rehabilitation are provided to the handicapped; avocational and vocational education are provided to adults on a continuing basis; and the school age population accrues the benefits derived from new and additional facilities at all educational levels. It has only been in the decade of the sixties that has given birth to the widespread development of community colleges. These institutions have provided previously unattainable educational opportunities to students of varying abilities in vocational-technical, academic and remedial programs.

The common denominator too often used by the public is the tax dollar paid to all levels of government. Increases in taxes have been associated with educational needs and not enough attention has been paid to the requirements of other state supported services. Little attention has been paid to the fact that the additional resource needs attributed to education are due to: (1) expanded offerings, (2) the current inflationary trend, and (3) the confusion which results when increased taxes are attributed primarily to education and not to other publicly supported services.

Purpose of the Study

This study was conducted for two central and related purposes: (1) to provide recommendations necessary for the implementation of an automated data processing system designed to collect, process, and summarize student, faculty, course, expenditure, and resource data and (2) using existing source documents, to provide expenditure and revenue data on a course section basis to demonstrate the potential of the system.

The collection and processing of section data served not only to illustrate (1) possible report formats, (2) costs based upon operational expenditures, and (3) the relative adequacy of selected resource monies, but more important as a test situation containing the types of problems which might be encountered in the implementation of a system and as a basis from which recommendations for a total system could be made.

Each of the two central purposes is more specifically identified below:

A. Recommendations for the implementation of a coordinated automated data processing system.
    1. The identification of basic source data.
        a. student information
        b. faculty information
        c. course information
        d. expenditure information
        e. resource information

2. The specification of data requirements and identification of processing techniques necessary to the computation of costs.
   a. the assignment of faculty loads
   b. the assignment of faculty salary to a specific portion of the total load
   c. the identification of the educational product in measurable units
   d. the chronological ordering or processing procedures necessary to provide required reports from the specified data

3. The determination of required reports.
   a. reports of primary interest to the local institution or district for decision-making or planning at the local level
   b. reports of primary use to centralized or state agencies to be used for decision-making or planning at the state level
   c. the collection of data using source documents, a card format or other computer input media which could be used by state agencies to complete federal reports

B. Provide cost, enrollment, and resource information on a section basis from available data.

1. Compute section costs from operational expenditures based upon:
   a. direct salary
   b. indirect salary
   c. departmental support expenditures
   d. institutional support expenditures

2. Identify enrollment on a section basis, according to:
   a. level (freshman, sophomore)
   b. the nature of instruction (laboratory, lecture, discussion, laboratory-lecture, practicum)
   c. the time of day offered

3. Identify resource data on a section basis.
   a. Junior College Board reimbursement
   b. Division of Vocational and Technical Education reimbursement
   c. tuition
   d. local district contribution
   e. projections based on maximum enrollment for a, b, and c above

4. Determine total and average costs by:
   a. discipline or department

b. educational or institutional product or credit produced
c. groups of individuals served

The Resource-Service Relationship

Resources must be related to services for (1) the purposes of accountability and (2) decision-making, planning, and allocation purposes which will allow for the optimum utilization of public funds. In most cases the resource-service relationship is not a direct one; ($R = S$) where R represents the resource and S the required service or product.

In actual operation the resources of different agencies may contribute to a single service, or conversely a single resource may contribute to many services. The accountability of funds to purposes is further complicated by the number of factors and relationships to be considered as illustrated below:

$$(1) \quad R = E = \frac{C}{P}$$

$$(2) \quad \frac{C'}{P'} = R' \text{ or } \frac{C'}{P'} \neq R'$$

where:

R = the total of all resources available to the institution

E = the expenditures incurred by the institution

$\frac{C}{P}$ = the cost for a measure of the educational product (e.g., credit hour, contact hour, student, student credit hour, etc.)

$\frac{C'}{P'}$ = the specific cost for a specific measure of the educational product (e.g., the cost for a disadvantaged student in a practical nursing program)

R' = the specific resource provided for this purpose

Educational expenditures incurred in behalf of instruction are the direct result of provided resources. Formula one indicates that resources from various agencies are combined to provide the total expenditures of an institution. While specific monies are categorically earmarked for certain services or certain students, rarely do these monies alone provide the total service provided to a given student (R = E). The total expenditures of the institution must then be assigned and allocated to some measures of the student product providing the cost for a measure of the student product. There are some costs such as general administration that apply to all students and other costs such as specific instructor salaries that apply only to certain groups of students.

For example students in a practical nursing program share in the direct expenditures incurred for the program such as instructor salary, supplies, travel and equipment. These students also share, along with all students of the institution, in indirect expenditures for general administration, general counseling and business affairs. It is the combined assignment of direct and indirect expenditures that provide the cost for a measure of the student product for students enrolled in the practical nursing programs (... $E = \frac{C}{P}$). Such costs may be determined for measures of the student product in all programs offered by the institution.

Formula two allows us to compare the cost for a given measure of the student product to specific resources. In the case of the practical nursing program it would be possible to compare for example the costs per student credit hour with the reimbursement per student credit hour provided by the Division of Vocational and Technical Education or other specific resources.

The adequacy and accountability of resources can only be determined if the relationship of specific resources to other resources is known.

Such relationships can only be determined through the computation of costs for selected measures of the educational product. Also, since resources are allocated for services to individuals with specific characteristics, it is necessary to be able to identify individuals associated with both the resources and product.

Such refinement in determining the resource-service relationship was not possible in this study. The data presented herein therefore represent calculations performed on a section basis and should be considered as an interim effort toward the attainment of desired data. These results and the procedures necessary for their derivation further serve to emphasize the need for the collection and processing of basic data.

Units of Measurement

The ideal cost analysis system would allow for assessment of each student's entering and terminal behavior and the determination of costs for the various experiences which have provided the change in behavior. While such behavior assessments and related cost assignment techniques are not beyond speculation, they bridge upon advanced educational techniques which in themselves are in need of further development before they may be implemented in an educational cost analysis system.

For the purposes of this study, as with other studies of this nature, traditional measures of the educational product were used. Such measures include: (1) the credit hour, (2) the contact hour, (3) the student credit hour, (4) the section, and (5) the student. Particular attention in this study has been devoted to costs assigned and allocated to each section and student credit hour.

The section module is the essential element in any study attempting to relate expenditures to resources. Sections comprise faculty loads and therefore allow for the assignment of teaching salaries. In addition, methods of instruction identified for each section determine limits on possible enrollment. Actual enrollment in a section is primarily influenced by student flow and administrative arrangements. While expenditures may vary among sections, as indicated by section and credit hour costs, it is the actual enrollment in a given section that primarily affects costs per student credit hour. The effect of enrollment can be ascertained only if data are collected and analyzed on a section basis. The section module can also be aggregated to provide department, discipline, program, or institutional costs and refined to provide student costs. Costs identified on a student or student group basis through use of section data are the most accurate means of tying expenditures to the purposes for which they were intended.

Services provided in support of sections, such as administration and the learning resources center, have been allocated or assigned using the section and student credit hour basis. By use of the student module, it would be possible to relate special supporting costs to groups, such as the handicapped, who receive these special services. Since such data were not available for this study, all such costs are included in the allocation or assignments to the total credits generated by the department or institution.

The Need for a Coordinated Data Processing System

The need for expanded services to more adequately meet the needs of all people within our society has created multi-level agencies, each charged with meeting the need of a specific segment of our population. The diverse purposes, revenue sources, agencies and institutions are interrelated in the services they provide and have not only made it difficult to relate funds to the purposes for which they were intended, but have also virtually eliminated the possibility of coordinated planning necessary for the optimum utilization of public resources. While the use of resources for their intended purposes is a primary consideration in the data processing system recommended in this study, the importance of the system's use for decision-making, planning, and resource allocation cannot be overestimated.

Accurate data necessary for the completion of federal and state reports are currently not available. In many cases, the reported data should not be used as an accurate indication of the relationship between resources provided and services rendered. Reports requiring the identification of individuals served and services rendered are often completed on an after-the-fact basis; while such reports may be prepared from the best available data, their accuracy could be greatly increased by allowing sufficient lead time to complying institutions or agencies so that the identification and collection of data could be made from basic and accurate sources. The specification of required data must be supplemented by policies as to how and when these data are to be obtained. In addition to consistent data collection procedures, the wide-spread use of an automated data processing system and procedures are the only means of handling the extensive data and analysis in an efficient manner. Such a system should provide for (1) the identification of persons being served according to characteristics that may relate to resources or services, such as age, sex, race, disadvantaged, and handicapped; (2) the identification of services provided as described by formal course and section offerings, guidance, or remedial work; (3) the costs of providing these services as they may be directly or indirectly assigned on a section or student group basis; and (4) the determination of the use of specific monies in relation to their intended purposes on the basis on computed costs. It is only through a coordinated comprehensive approach and the use of automated data processing that refined data in the necessary categories can be analyzed for use in decision-making, planning, and resource allocation.

The Coordinated Data Collection and Processing System

The mass and refinement of data necessary for providing accurate reports require the use of (1) automated data processing and (2) source documents designed for data collection at the most basic level of availability. Reporting institutions should concurrently provide all source data necessary for the various reports required by all agencies. These source data could then be processed by a central processing service capable of providing the specific reports desired by any agency. These procedures would reduce the amount of time and money presently consumed by complying institutions providing separate and slightly different reports concerning the same source data to different agencies and greatly increase the validity of submitted reports. In addition, the complying institutions could utilize the same data for internal operation and planning.

The Data Base

The data base should be composed of five sources, each of which provides the desired data in its most basic form. These sources, as previously identified, are: (1) the student, (2) the section, (3) the faculty member, (4) the general ledger, and (5) the payroll ledger. All data collection systems and cost analysis studies rely on such basic data. However, until the relatively recent wide-spread use of computer services, the collection of source data in refined form has not been possible; the existing data from these sources has been in gross categories and often the categories are inconsistent from source to source. Chapter III describes the state-of-the-art in existing data and also describes the methods used in this study. Chapter VI presents the findings and conclusions concerning recommended data sources, data refinement, and systems implementation.

Processing

Once source data have been uniformly obtained and verified, they may be compiled in increasing levels of aggregation and in different formats to meet specific needs. Generally, the most detailed reports such as faculty load assignments and individual section enrollments would be determined by and returned to the reporting institutions for local use. Summaries and comparisons would then be prepared for both state and local purposes. Tabulations on a district or state-wide basis would also be derived from the basic source data.

Current state-wide processing procedures in Illinois and other states require that data acquired at various levels of aggregation be reconverted to card format for computer utilization in tabulation procedures. In those local and state systems which are currently partially automated, the identification of specific student characteristics is not possible.

The coordinated data collection system presented in this report may be used as a base for: (1) reimbursement procedures, (2) decision-making and planning at the local, state and federal levels, (3) determining the accountability of funds and (4) the provision of all necessary reports describing student characteristics, educational services, and costs.

Chapter V of this study provides, in greater detail, recommendations concerned with data needs, collection, and processing.

Significance of the Study

This study has developed an efficient system for the identification, collection, processing, and summarization of expenditure, resource, enrollment, and student data on a section basis at the junior college level. While such procedures can be expanded to meet the needs of any agency or institution, it is assumed that such data will be of particular value to the Division of Vocational and Technical Education and the Junior College Board since both agencies are responsible for program approval and the provision of funds for occupational programs to the Illinois public junior colleges. The system could be used:

1. In determining the students served and the services rendered.
2. In developing a basis for determining a structure of costs and projections upon which requests for state appropriations can be based.
3. In developing equitable funding procedures based upon the actual costs of different educational purposes.
4. In developing sound management techniques applied to the expenditure of funds at the state and local levels.
5. In determining the location and number of programs.

Data collected by the suggested procedures could be used in future cost-effectiveness and cost-benefit studies if appropriate follow-up techniques and the determination of monetary and other benefits are developed. The section and student modules also lend themselves to incremental planning required for planning programming budgeting systems (PPBS) and other systems designed for decision-making, planning and resource allocation.

Definition of Terms

Allocation - This term is used to describe the proration of expenditures identified at the institutional level among the total student credit hours generated by the institution. Such expenditures include general administration, the learning resource center, maintenance, etc., which are distributed equally among all student credit hours.

Assignment - This term is used to describe the proration of expenditures at the department or discipline level among student credit hours generated by that department or discipline. Such expenditures include supplies, materials, instructional and administrative salaries of the department, etc. Assignment is differentiated from allocation in that the latter is the term used to describe the proration of expenditures identified at the institutional level.

Assignment, Departmental Supporting Expenditures - All expenditures assigned to a department with the exception of direct instructional salary may be termed supporting expenditures. These include indirect salary, research salary, advisement, administrative salaries, supplies, materials, contractual services, etc. When these supporting expenditures (not including capital outlay) are divided by the student credit hours generated by a particular department, the supporting department cost assignment per student credit hour results.

Assignment, Salary - In the case of direct salary assignment, the gross salary of an instructor is prorated among the activities comprising his load according to percentages of load devoted to each activity. The dollar amounts identified for each activity are then assigned to the credit hours of a course or the student credit hours of a discipline, department, etc., as deemed appropriate by the nature of the activity.

Credit Hour - The unit of academic credit for which acknowledgement is made by the college. Credit hours are offered through either the quarter-hour or the semester-hour system. One credit hour on the semester system represents one hour of classroom instruction per week for the eighteen-week semester. One credit hour on the quarter-hour system requires one hour of instruction per week for the twelve-week quarter. A quarter-hour is equated to two-thirds of a semester hour. For calculations and equivalency purposes non-credit classes are assigned a credit equivalency.

Department - The department is an administrative unit with the responsibility of initiating and offering courses and programs in a given instructional area. The department is typically made up of staff members who are responsible for courses and programs which comprise similar instructional areas and have been assigned discipline codes for purposes of the Illinois Junior College Unit Cost Study. For example, the disciplines (or instructional areas) of General Business, Accounting, Typing, Shorthand are included in the Department of Business. Other responsibilities which are generally assigned to the department (but may also be assigned to programs or disciplines) are the scheduling of classes, the procurement of equipment and supplies necessary to the offering of these classes, the development of curriculum materials, student advisement, etc. (Also see Discipline)

Designed Enrollment - Each classroom, laboratory, or instructional group (section) is typically designed to accomodate a range of student enrollment. This range is dependent upon the nature of instruction, the size of the classroom facilities, the type and amount of furniture, and the equipment contained within the classroom. In the case of a laboratory situation, the percentage of effective utilization of equipment must be taken into consideration. Calculations in this study have not been based upon a range but rather the designed maximum number of students which could be accomodated in a given section.

Discipline - As used for the purposes of this study, a discipline is an area of instruction comprised of all courses similar in content or subject matter (e.g., all courses in typing form a discipline or all courses in each of: accounting, data processing, and salesmanship). In those cases where the student flow in the discipline is large enough or where a more precise organizational structure and accounting procedure have been established, responsibilities generally assigned to the department may be made the responsibility of each discipline. (Also see Deparment)

Discipline Code - The discipline code refers to the numerical coding system assigned to the departments and disciplines used as cost units in the Illinois Junior College Board Unit Cost Study and for purposes of identifying enrollment by the Illinois Division of Vocational and Technical Education. Three codes similar in format have been separately developed for the transfer, occupational, and general curricula.

Discipline Code, Baccalaureate - The discipline code used to identify a transfer discipline was developed by the Board of Higher Education. It has been applied to the baccalaureate disciplines in the junior college to allow for a comparison of costs between the junior colleges and other institutions of higher learning.

Discipline Code, General Studies - The discipline code used to identify general studies disciplines was developed by the Junior College Board. General studies programs refer to foundation programs which are typically remedial in nature and are not usually offered by the universities. The lack of an existing discipline code to identify the general studies disciplines required the development of a new code by the Junior College Board.

Discipline Code, Occupational - Since occupational programs are offered by junior colleges but not often by universities, provision for identifying occupational disciplines was not made by the Board of Higher Education. The discipline code adopted by the Junior College Board to identify occupational disciplines was initially developed by the U.S. Office of Education and used by the Division of Vocational and Technical Education. However as the code has been modified by the U.S. Office of Education, such modifications have not been added to the Junior College Board Occupational Code. In this study, the codes assigned to occupational courses by community college personnel have been updated to match the current U.S.O.E. Occupational Coding System. Those codes assigned to the baccalaureate, general studies, and adult and continuing education have been used as assigned by the college.

Educational Service - Educational services for the purposes of this study are defined as measurable units of instruction provided by the institution and its faculty. While such services normally comprise formal instruction, they may also be offered as workshops, in-service training sessions, independent studies, or informal group activities of an avocational nature. Educational services as defined here are differentiated from public and consulting services, speaking engagements, and the provision of facilities which are normally considered to be services of the institution.

Expenditures, Capital - Capital expenditures refer to equipment and facility costs not normally expected to recur on a continuing basis. Such expenditures are typically expected during the initiation of new programs or the initiation of a new institution. Capital expenditures, in the form of equipment, are also incurred on a replacement basis.

Expenditures, Operating - Expenditures which are normally expected to recur on a yearly basis are termed operating expenditures. All types of salaries, supplies, materials, contractual services*, rental*, and travel are commonly included within this classification. (*Computer rental, facility rental, and the purchases of services supplanting capital expenditures will not be considered as operational expenditures.)

Overload - Overload is normally considered as an activity rendered by a faculty member in addition to those which comprise his normal contracted load. Amount of overload is typically determined in terms of credit hours for courses taught or part of a course taught by an instructor in addition to his normal credit hour load or may be granted in the case of extra assignments for administration, curriculum development, or counseling. Overload assignments are normally accompanied by additional salary within the policies of each institution.

Program or Curriculum - The sequence of courses required by an institution which leads to the awarding of a degree or certificate is called a program. Programs usually vary from one to two years in length and are offered in the General Studies, Occupational and Transfer areas by the junior colleges. The specific courses required for each program as approved by the Junior College Board or the Division of Vocational and Technical Education or both agencies are listed in the catalog of each college.

Student Credit Hour - Student credit hours are dependent upon the enrollment of each course and the amount of credit for which the course is offered. The product obtained by multiplying the credit hours for which a course is offered by the enrollment of the course provides the student credit hours of that course (e.g., a class offered for three credit hours and having an enrollment of 20 students would yield 60 student credit hours). Student credit hours may be based upon either semester or quarter-hours. One quarter-hour is equal to two-thirds of one semester-hour and either base may be equated to the other for computational and comparative purposes.

Unit - The unit is an identifiable measure of the educational product to which expenditures may be assigned, or which may be used in the assignment of expenditures. Typical units include the student, the program or curriculum, the contact hour, the credit hour, and the student credit hour. The student credit hour illustrates a unit to which expenditures may be assigned and which also may be used in the assignment of expenditures. In the former case, total expenditures may be divided by total student credit hours providing for the assignment to a student credit hour. In the latter case, the student credit hours of a section may form a ratio with the total student credit hours of a department which would then be used to prorate expenditures to the given section.

Summary

This Chapter has presented the basis for resource accountability and the collection of data to be used in decision-making, planning and the allocation of resources. Accountability concerned with educational resources and needs can only be viewed from a position which establishes a perspective including all resources and needs of society. The demands for data impressed upon the local institution by different agencies which provide resources require efficient data collection and processing procedures. The current complexities brought about by the many agencies which distribute funds, the inadequate source data and the many differing educational institutions which provide services prevent the determination of a direct revenue-service relationship. The determination of costs and whether funds are used for intended purposes requires the identification of expenditures and the calculation of costs for some measure of the educational product. These costs may then in turn by compared with the actual revenues provided. The multi-agency demands for accurate data to be used for resource accountability and allocation can only be met through the implementation of a coordinated automated data processing system. While the data presented in this report have been prepared from the best available sources, they should be considered only as interim results. The major value of this study lies in its recommendations for the implementation of a coordinated and automated data collection and processing system.

CHAPTER II

REVIEW OF RELATED LITERATURE

The review of the related literature pertinent to this study concerns several separate but related areas. These include: approaches to the providing of resources, data necessary for the justification of resources provided by separate agencies, current approaches to planning and decision-making which provide for the wise use of funds, methods used to assign and allocate expenditures for the purposes of computing costs, determination of the appropriateness of various cost units and the variables which affect them, and a review of the development and limitations of educational accounting systems. This chapter is not intended to be an all-inclusive, in-depth review of available literature in each of these areas but rather a presentation of selected literature representatives of appropriate past and current writings in each of the areas.

The Provision of Resources

Resources are provided to educational institutions by many federal, state, and local agencies. Each agency and the funds made available to it have their purposes specified in state or federal legislation. The agencies in turn must establish policies, priorities and guidelines in using the funds for the intended purpose(s). Therefore, each agency must (1) obtain data concerning the services needed and resources available for purposes of decision-making and planning, (2) allocate resources to purpose, and (3) after expenditure, verify that the services were provided according to policies. The present multi-agency, multi-level funding approach has developed a hierarchy of required reports beginning with the smallest operating program or service in a local district and progressing up to such large federal offices as the Department of Health, Education, and Welare. While the collected data are of use at the local institution and at each of the progressively higher levels of government, they appear to be most useful at the state and the federal levels. Here the data may be used to justify and request funds and to establish educational policy on a state-wide and national level.

As a result of such funding procedures, Mood and Powers (1967) provided an interesting description of the data collected and distributed by the U.S. Office of Education. They indicated that the traditional goals of reporting systems included the improvement in the quality of education, support for congressional and legislative action, measurement of the extent of educational programs, minimizing of data collection, and maximizing the consistency of collected data. While such traditional goals are certainly of value, actual practices tended to minimize the adequacy with which such goals were met.

Typically, the measurement of the extent of educational programs includes only those programs to which federal resources have been provided. While the goals of minimizing data collection and maximizing the consistency of collected data certainly have had a high priority, the consistency has been questioned by persons concerned with the interpretation of collected data, and the minimization of data collection certainly has been doubted by persons at the local institution responsible for completing reports. Such goals in data collection are, however, necessary to the continued development of education and the provision of adequate funds.

Hirsch suggested the importance of the federal government in education and the need for data in addition to that typically collected by traditional reporting systems. Specifically, he indicated a need for data which can be used in a programmed budget:

> The education budget of the federal government should give expression to the nation's position toward education, and should facilitate long-range projections even though the education demand and supply picture involves major uncertainties. Although different types of education and their output cannot be measured by simple quantitative terms, the program budget if properly designed, can provide partial quantitative information that elucidates some of the consequences of spending funds on different programs. It follows that educational decisions relate heavily to the future and that if they turn out to be wrong they cannot be readily reversed. (Hirsch, 1967, p. 198)

Bradley (1968) also indicated a need for data and better techniques for budgetary decision-making. He indicated that the complexity and costs of government services have increased enormously and that better methods for efficiently allocating scarce resources of the government among the various objectives and service demands was essential. Bradley and Hirsch each indicated that program budgeting was one such method being introduced to all levels of government prior to and during 1968.

While the need for additional data to be used for decision-making, planning, and accountability may be easily justified, the collection and processing procedures, such as those needed for program budgeting, are difficult to implement.

> Program budgeting structures tend to be imposed from the top, data comes up from the bottom, and herein lies the unremitting difficulty. A recent program planning and budgeting system permitted an easy identification of how much was spent by purpose, educational level, and by ultimate program recipient, such as an individual, a state agency, or a local agency. It was mainly an operational accounting system by means of which one can identify program costs. Some such system as this is absolutely essential for meaningful cost-benefit analysis of a nationwide education system. We cannot do cost analysis without costs. (Mood and Powers, 1968, p. 23)

Even more basic than the justification of current methods of funding by many separate agencies and the accountability of funds is the question of how can adequate resources be provided to meet the needs of all the people. McClure (1955) suggested that consideration be devoted to two broad areas, that of providing an adequate program of financial support for the public schools and that of providing a distribution plan which is needed to finance such a program.

> It is common practice among leaders of the government and citizens in general while viewing the needs of public elementary and secondary education with one eye to keep the other eye focused on such things as the needs for higher education, other needs of government and estimated available tax resources. All of these forces press down upon the taxation system causing leaders to take the only rational course available at times, namely to compromise desirable needs in various areas. (p. 20)

McClure (1956) further indicated a need for a combination of state and local tax resources for the support of schools but appeared to be against categorical aid of any type. He stated that the partnership of the state and local tax bases devoted to the support of schools actually originated with public education and that the increased proportion of total school funds from state revenue has resulted from several causes: (1) increased school population, (2) expanding nature of the school program to serve a more complex society, (3) attempts to equalize support for minimum foundation programs, (4) attempts to stimulate the introduction of desirable practices, (5) attempts to support special services such as adult education and programs for the handicapped and disadvantaged, (6) matching federal special purpose grants, and (7) relief of the local tax base. (p. 129)

McClure (1960) also discussed the use of special funds to provide specific services and programs. He indicated that such funds were initially provided to stimulate and develop services and programs which could not otherwise be established. However, as time went on and the programs became established, some of the special funds were not withdrawn or diverted to other new developments but unfortunately remained as part of the financial support maintaining the various programs and services. As an alternative to categorical funding, McClure suggested that monies necessary for the offering of adequate programs be provided to the local institutions from a combination of local, state, and federal resources. His approach would be to then evaluate the offerings as to their adequacy instead of the use of specific funds to see if the total funds were achieving the purposes for which they were intended. McClure also suggested two approaches which may be used to determine the fiscal requirements of a school district. One requires the analysis of costs of the total program and the construction of a cost unit properly weighting the components and sums these to identify monies necessary for adequate program offerings.

The establishment of a community college system offering vocational and technical education at less than the four-year level was also discussed by McClure (1960). He indicated the community college system to be the most imaginative structure for offering vocational and technical education. One of the primary considerations in his reasoning dealt with the minimum number of students and resources necessary to support such programs. The junior college could serve as a center attracting students from various areas within its service district thus allowing the traditionally higher cost programs the advantage of optimum student utilization.

In regard to the funding of junior colleges themselves, McClure further indicated that the traditional methods of state support for senior institutions of higher education be provided to the junior colleges. Local support, already hard pressed for educational monies, and existing combinations of local and state support have proven inadequate in terms of the demands placed upon them.

This section has reviewed the current methods of funding educational programs by specific purposes where the collection of accurate data must be accomplished to allow for decision making and planning at the federal, state and local levels. While data collection procedures have long been in existence, the data obtained are inadequate for current needs for planning and resource allocation. An alternate approach to funding and reviewing the use of funds has been included in the work of McClue who voiced opposition to categorical funding. His suggestions that programs be evaluated and not necessarily the separate monies used are of great value but are limited by: (1) current funding policies initiated at the federal level, (2) the lack of adequate methods necessary for program evaluation, and (3) the primary consideration of services rendered but not the students served. However, in all approaches it is essential to identify costs of programs and services for planning and allocation purposes.

Approaches to Decision Making and Planning

The relatively limited amount of resources available for educational services has led to the development of various approaches designed to effectively allocate and evaluate the use of educational resources. Such approaches include planning programming budgeting systems (PPBS), program budget systems (PBS), cost-effectiveness studies, and cost-benefit studies.

All of these approaches contain certain common elements and in the eyes of at least one analyst were considered to be the same:

> Analysis as used in PPBS is referred to by various names, such as: cost-effective analysis, cost-benefit analysis, systems analysis and cost-utility analysis. Although some writers will draw a distinction among these various terms, the approach is basically the same. All of these terms convey certain analytical approaches toward decision-making for purposes of program formulation and resource allocation. (DonVito, 1969, p. 12)

Kraft (1969), however, chose to differentiate among approaches such as cost-effectiveness, cost-benefit, and cost-utility. According to his definitions, cost-effectiveness relates to the fulfillment of short-range objectives and criteria which are usually of a directly quantifiable nature. Cost-benefit refers to the fulfillment of intermediate-range goals where much of the data are still quantifiable but qualitative data are needed. Internal benefits are stressed in the cost-benefit approach and this is the area of greatest interest to the educational planner and economist.

A clearer distinction between cost-effectiveness and cost-benefit may be drawn in that cost-effectiveness deals with alternate procedures necessary to the attainment of a specific objective. Cost-benefit relates benefits accrued to the individual and societal benefits which are the results of expended resources. In addition to cost-effectiveness and cost-benefit, Kraft described a third approach, that of cost-utility which uses criteria primarily concerned with external benefits or returns to society. In addition to life-time earnings and social returns in the form of taxes, utility criteria include the fulfillment of such factors as social demands, leisure activity, etc., which have been achieved through experiences gained in the educational process.

As broadly defined by Quade (1965), cost-effectiveness analysis is any analytical study designed to assist the decision maker to identify a preferred choice from among possible alternatives. He further indicated that this method typically includes a statement of objectives, alternate means of achieving objectives, cost for each alternate procedure, and perhaps a model to represent a simplified version of the real world.

While the positive benefits of decision-making procedures have been stressed, Wilvavsky (1966) suggested that all relevant decision-making factors cannot be squeezed into a single formula. He indicated that the contribution of the economic analyst has been over-emphasized. The analyst is accountable for only one input into the decision. While policy makers may not want this kind of input, they may want the answer or at least an answer they can defend on the basis of an analyst's legitimized expertise.

It is important to note that accurate program cost estimation requires more than the collection of historical data and the correct format. Fisher (1968) indicated that consideration must also be given to data on quantitities, performance characteristics, activity rates and other types of cost generating variables and, in most cases, the ability to engage in cost analysis requires the use and development of cost models. Lack of such information was reported by Kraft in 1969. While conducting a cost-effectiveness study in vocational and technical education, Kraft identified many theoretical analyses in the area but found that relevant empirical data were practically non-existent. He indicated that available published data were usually aggregated and excluded the identification of many pertinent economic variables and concluded that such material has therefore been of little use to the vocational-technical administrator.

Still another approach to the utilization of data for decision-making and planning is that of systems cost analysis. The primary contribution of systems cost analysis is the establishment of proper cost categories:

> System costs are identified and grouped as (1) research and development, (2) investment, and (3) annual operating costs. These cost categories reflect the life-cycle approach to cost analysis. Life cycle costing results from the principle that funds necessary to initially undertake a program are not the primary consideration, nor are the funds required in any particular time period; but a decision to undertake a particular course of action should take into account the total cost impact over time. (McCullough, 1966, p. 17)

Bradley (1967), elaborating upon the components of systems cost analysis, stated that this procedure involves a careful specification of objectives and an identification or comparison of alternate means by which objectives may be achieved. He indicated that the total cost implications, direct and indirect, must be estimated for each alternative. Similar estimates were then made of the effectiveness of each; the comparison of alternatives often involved the identification of factors which would minimize costs subject to some fixed performance requirement.

The identification of resources with the purposes for which they were intended must be coupled with procedures which allow for decision making and planning necessary to the effective utilization of the resources. This section has been devoted to procedures basic to decision making, planning, and resource allocation. While such procedures differ, all allow for the evaluation of the use of resources and contain such common elements as the specification of objectives, the identification of costs, and the evaluation of alternate procedures to accomplish stated objectives or the evaluation of resources necessarily consumed to provide a desired service or outcome. The procedures presented here are based at least in part upon the type of cost data and measures of the educational product identified in this study. The data and recommendations contained herein may therefore be considered as a first step toward more refined procedures concerned with planning, decision making, and resource allocation.

Coordinated Data Collection Systems

The volume and refinement of data necessary to support the various approaches discussed in the preceding section as well as routine student characteristic and enrollment reports demand the development of a coordinated data collection and processing system. Such a system would begin at a local level with the collection of accurate source data and allow for the compilation of reports useful at the local, state and national levels. Such an effort is not possible without the utilization of computerized data processing. The collection of source data on an individual student unit basis is not feasible without computer utilization, nor can the multitude of calculations necessary be accurately and efficiently performed. In addition, computer utilization will allow for the preparation of partial reports or selected data as requested or needed by any agency.

While the computer has eliminated many routine tasks associated with data preparation and provided for analyses heretofore impossible, its usage may be associated with new problems:

> The impact of computers in education, instruction, research and administration of the nation's schools poses a major problem in re-evaluating procedures formerly associated with these

> areas. Methods used in the past may well be functionally efficient; however, computer assisted systems have speeded up these procedures immeasureably and in doing so, have created new administrative problems, among them that of efficiently handling the monumental information output. (Caffrey, 1968, p. 135)

The true value of computerization is not often appreciated until after a system has been implemented. Situations arise which have not been planned for but can be readily handled from the existing data base with programming changes.

One illustration given by Caffrey (1968) involved that of a researcher at Claremont College who developed a program to handle state-aid apportionment claims in California. The process which previously had taken several weeks on punch card equipment was processed on a computer in one minute. While the computer solved the immediate problem, its true value was demonstrated when approximately 60 different apportionment formulas using various assumptions and weighting factors could be applied in an hour. Caffrey further estimated that the proper apportionment formula saved the taxpayers of California several thousand dollars.

It must be clearly understood that the large amount of money and time necessary to the computerization of a manual system, particularly those systems suggested in this review, can be justified only on a coordinated data collection basis. Too often each governmental agency collects and processes only those data which are of use to their agency for decision making and planning or which must be submitted to a higher level agency responsible for further processing. The separate and individual collection procedures require vast and duplicated amounts of time on the part of the reporting institutions in addition to duplicated data storage facilities and significantly reduced value due to incompatibility.

Cutchins (1954) indicated that most governmental electronic data processing applications had been made on an individual application basis. He further indicated that the lack of interrelationships between departmental data processing services within the government causes duplication in the gathering and retention of data. The information concerning one person is used in many different departments and is collected several times when one collection would be sufficient.

Although the Cutchins report described the Roanoke Valley Regional Planning Commission, the situation applies equally to current efforts and problems in the State of Illinois at the junior college level. At least three separate agencies are interested in collecting enrollment and cost data upon which financial support monies are based. While attempts have been made to automate portions of the required data processing necessary for individual agencies, a total approach to an information system has not been fostered.

Part of the reason for the lack of a coordinated state-wide or federal system of data collection and processing is due to the fear that such a system will threaten the traditional spirit of education. Chambers (1961) provided an interesting position in this regard:

> Measures aimed at coordinating a state system of higher education may be self-defeating or even worse if they poison the atmosphere of automony and pluralism which have nourished great universities; it may even reduce governing boards to figure heads or abolish them altogether; if they tend to reduce presidents, deans, and professors to the status of routine classified employees of the state. All this is foreign to the spirit of the university. (p. viii)

While Chambers described a possible threat to the universities, his comments should by no means be limited to them. Current attempts toward the collection of enrollment and cost information on a state-wide basis in the junior colleges are also seen as possible threats to local autonomy. Similar views are held by persons at the secondary and elementary school levels.

Unfortunately, the introduction and utilization of a computer in an information system is often poorly planned with an over-emphasis upon the role of the machine. Simms (1968) indicated that the computer is just one of the major elements in an information system which involves people, materials, and procedures in addition to a machine. He further stated that the introduction of a computer into a previously manual system requires a detailed study, evaluation and re-design of the traditional data gathering, processing, and evaluation methods. Simms (1968), in describing the implementation of a coordinated educational information system in the State of Florida, stated the need for a preliminary study to identify the current state-of-the-art. The study emphasized questions such as: (1) what are the contents and outputs of the existing system, (2) of what value are the output documents, (3) what type of data are gathered by source documents, (4) where is the source of input data, (5) what processes do the data go through in moving from the source document to the output document.

Too often, using a systems approach is interpreted to mean only the introduction of a computer into a previously manually operated system. Consideration is typically given to the fact that one element, namely that of processing, will be changed but not to the fact that all elements will be changed and perhaps the system will require the addition of many new elements. Persons in favor of a system and responsible for its implementation voice only the positive attributes. Those persons fearing loss of job security in view of their lost role as processors as well as those who feel that the collection of priority information will threaten the strength of local autonomy voice only negative comments and resentment. In general, there is a lack of realization that computer based systems are necessary to our complex educational system and that their implementation will, in the end result, provide data and evaluation schemes necessary to the continuance and future development of the educational process.

Measures of the Educational Product

Schools exist for the purposes of educating students and providing services to the community. If it were possible to measure entry level and terminal behavior for each student, a measure of the educational product could be secured. While such measurement is not beyond speculation, such measurement techniques are themselves in need of further refinement and this approach was therefore considered to be beyond the purposes and scope of this study. This study was therefore based upon the more traditional units of measure such as the contact hour, the credit hour, the student credit hour, and the course section.

Even when based upon traditional measures, the assignment, analysis, and comparison of educational costs become complicated when consideration is given to the many measures of the educational product which may be identified. Such units include the clock hour (Stephens and Elliot, 1925; Harris, 1962), the full-time equivalent student and the student (Harris, 1962), the contact hour (California and Western Cost and Statistical

Study, 1954-55), the credit hour (National Committee on Standard Reports for Institutions of Higher Education, 1935; Anderson, 1965).

While each of these measures has served as a cost unit in previous educational cost analysis studies and as a means of identifying services rendered, it is a combination of these units as they relate to each other that provides the basis for accountability and adequacy of resources in terms of incurred expenditures. Current resource allocation procedures require the identification of: (1) the student served, (2) the type and amount of service rendered (e.g., an eight credit hour course for practical nurses), (3) the relative costs for providing each service to students, and (4) the adequacy of provided resources as may be identified by a comparison of provided resources and costs.

This last necessity, that of determining the adequacy of resources, can be only relatively discerned on a monetary basis. The decision to offer a particular service to particular students becomes a subjective decision increasingly based upon moral convictions. The initiation of a program for the handicapped may be greatly encouraged through the provision of supplemental monies by a specific agency, but the development and continuation of such a program will ultimately be a decision on the part of the local institution based on its educational objectives and the amount and availability of necessary funds.

Expenditure Identification

The accountability for and adequacy of various resources can be determined only if expenditure identification, assignment, and allocation provide for the accurate calculation of costs for various measures of the educational product. Anderson (1965) indicated that the total cost of educating a student consisted of several component parts. He identified these to be administration, salary costs of teachers, support expenditures for instruction, the operation and maintenance of plant, auxiliary services, fixed charges, and other indirect expenses. While Anderson considered capital outlay expenditures for facilities and equipment, such expenditures were not included in this study.

Educational expenditures are of course directly related to the needs of the instructional program. Demands upon institutional recordkeeping, however, require that expenditures be recorded and charged according to established accounts. Cost analysis techniques in turn require that expenditures charged to accounts be assigned and allocated back to the needs for which they were incurred. This cyclical process lessens the precision with which the identification of expenditures incurred can be related to specific elements of the instructional program. While it would be neither desirable nor possible to charge each expenditure directly to a selected measure of the educational product, refinement in existing accounting systems can be designed and implemented to provide accurate expenditure data.

Lawler (1955) indicated that accounting systems used in colleges and universities have developed during the last fifty years because institutions of higher learning have become an important sector of our economy. He further indicated that the fact that colleges and universities are non-profit organizations and lack a direct relationship between income and expenditures has no doubt slowed the development of refined accounting procedures. Lawler contrasted commercial enterprises with educational institutions in that in the former case expenditures are made for the purposes of creating income while in educational institutions almost the reverse is true since expenditures become dependent upon income.

The lack of suitable accounting procedures has in turn slowed the development of cost studies. On the whole, colleges and universities have tended to neglect the relationships between expenditures and measures of the educational product produced. Harris (1962), in addition to Lawler, contrasted industry to education. He stated that industry must relate its prices to costs and therefore must identify costs. Cost accounting has therefore served as a principal source of guidance for industrial management. Harris further indicated that such a cost-product relationship does not exist in education and that decisions made by educational administrators have not been based on such a relationship. Recent decisions and positions taken by legislatures and government officials indicate the industrial cost-product model will be applied to educational funds.

The development of an appropriate accounting system must be accompanied by its implementation on a state-wide or national level, certainly at least among the institutions which are to participate on a continuing basis in any type of cost analysis study. A state-wide accounting system has been in use in Illinois for several years; however it is inadequate for purposes of cost analysis. Luman (1968) reports a more adequate system in use in the Chicago City College:

> Since the inception of this study (1968) an accounting system basically identical to the one used has been adopted by the Chicago City College, the public jumior colleges of Chicago. The Chicago City College accounting system has been effective in meeting ordinary college and university accounting needs and holds much promise for program cost-accounting, when it is fully implemented. (p. 47)

The need for the development of a state-wide accounting system in educational institutions is easily agreed upon by those responsible for the provision and interpretation of reports. The establishment of a system of accounts containing sufficiently refined categories which may be used for cost analysis procedures at all complying institutions, however, is a different matter.

Basically, all expenditures may be classified into one of two categories: (1) operational expenditures and (2) capital expenditures. While all expenditures lend themselves to this classification scheme, the services for which they were incurred do not. Expenditures incurred for computer services and institutional facilities serve as an example. It is difficult to compare the expenditure for the rental of one year's computer equipment at one institution with the purchase price of the same equipment incurred by another institution. It is also difficult to relate the capital expenditures for a computer data processing program to the capital expenditures for other programs at the same or at different institutions. The California and Western Cost and Statistical Study for 1954-55 indicated that it may be better not to include the cost of equipment in any annual cost determination since such equipment expenditures in any given year may be of a non-repetitive nature.

Since the treatment of operational and capital expenditures differ so markedly, each will be treated separately in the following review of the literature. Furno (1965) provided a detailed categorization and description of the expenditures included within each. His index provided for the identification of salaries, contractual services, supplies, and travel expenditures. Such a classification scheme is typical of that in use at many educational institutions. Furno, however, differentiated major institutional expenditure such as the operation of plant from the maintenance of plant. He indicated operation of plant to involve expenditures necessary for keeping the grounds, buildings, and equipment as close as possible to their original condition. In addition, fixed charges included expenditures of a generally recurrent nature which could not be easily allocated under any category. Fixed charges included insurance, rental of land and buildings, and interest on current loans. Debt service payments included the amount expended by the school district for payment of interest charges and reduction of principal in outstanding indebtedness while the types of expenditures may be identified, none of the cost studies reviewed devoted sufficient attention to the establishment of a refined accounting system. These studies were not conducted on a continuing basis and therefore utilized existing ledger accounts and supplemental expenditure data as available.

The inclusion of capital expenditures, their identification, and treatment was generally illustrated in the literature. VanDyke (1935) indicated that the inclusion of capital expenditures in a cost study would necessarily involve depreciation and that since educational institutions, as other government enterprises, are not subject to tax and when long-term loans are obtained they are rarely secured by liens on property, the fundamental purposes in determining an accounting for depreciation do not apply. Furthermore, he stated that in accounting for governmental enterprises and activities (except those of a business nature such as public utilities) it is more desirable that the original cost of property be known, not a depreciated value.

Although the development of a depreciation scheme for educational institutions appears to be of little value for some of the purposes appropriate to private business, VanDyke indicated the following three purposes which might be served by computing annual depreciation: (1) depreciation could be used in determination of values of property for insurance purposes, (2) depreciation could be used in determination of cost of instruction, and (3) it could also be used as an indication of the amount of money necessary for the replacement of property and equipment.

For the purposes of cost assignment and analysis, all institutional expenditures should be identified and included. Capital expenditures, however, should be depreciated according to a schedule which is agreed upon and understood by all participating institutions. While it is doubtful that a precise depreciation schedule can be developed, cost studies conducted over a number of consecutive years will tend to equalize any disproportionate capital expenditure assignments to a given year.

Once an appropriate measure of the educational product has been selected and expenditures have been identified, and in the case of capital expenditures appropriately depreciated, cost studies require the assignment and allocation of expenditures to the educational product.

Assignment and Allocation

The one largest and most easily identifiable expenditure is that of teaching salaries. The assignment of the teaching expenditure requires the identification of each instructor's salary which may then be prorated to the activities which comprise his contracted load or assignment. Anderson (1965) suggested that salaries be prorated on the basis of contact hours while the California and Western Cost and Statistical Study for 1954-55 suggested the use of both contact hours and credit hours. The most accurate method of prorating teaching salaries while still allowing for institutional flexibility was originally suggested by the National Committee on Standard Reports for Institutions of Higher Education, 1935. While questioning the validity of this method, the committee suggested the use of percentages of faculty load for the assignment of salaries to a given activity. At that time it appeared that the validity of percentage assignments could be questioned. However, if such percentages could be cooperatively developed by each individual faculty member and the appropriate administrator according to institutional policy, the assignment of percentages would not only allow for the accurate proration of salaries to a given activity but also provide a measure of full-time equivalent loads assigned to the activity. Since data on a percentage basis were not available for use in this study, contact hour ratios were used to determine a percent for assignment of faculty salaries to teaching activities. However, studies conducted on a continuing basis should utilize percentages of faculty load to prorate staff salaries to all activities of the staff member.

The use of a percent of load index has many advantages not present in other indicies. Local policies can retain a degree of flexibility; also, differences between types of instruction, size of class, split assignments for teaching and administration, different or repeated preparations and many other factors can be taken into account in determining the percent of load to be assigned for each activity. The percent index is easily converted to determine costs and provides a common basis across programs and instruction.

In the case of supplemental expenditures, the student credit hour was used as a basis for the assignment of expenditures identified at both the departmental and institutional levels. Such techniques were used by Anderson (1965), the California and Western Cost and Statistical Study, 1954-55, and suggested by the National Committee on Standard Reports for Institutions of Higher Education, 1935. The student credit hour is considered an appropriate base for proration since it indicates both a measure of the educational product (credit hour) and the number of students availing themselves of the credit hour unit.

Other techniques for expenditure assignment and allocation were also identified. In the case of library expenditures, the National Committee on Standard Reports for Institutions of Higher Education, 1935, suggested that expenditures should be determined by objective studies conducted within libraries or on the basis of an estimate by the head of the library. If such procedures were not possible, expenditures were to be allocated on the basis of departmental expenditures for books. In addition, the committee indicated that the allocation of expenditures for plant space required a complete analysis of each building of the institution and the determination of the square foot of space available. Such expenditures could then be prorated to a particular instructional unit on the basis of the square footage which it had used. In the case of overhead, the committee suggested the use of the credit hour, the student credit hour, or the full-time equivalent student. Such proration techniques afford a greater degree of refinement than used in this study; however, they were not used in view of existing general ledger limitations and the temporary or quasi-temporary facilities of most junior colleges in the State of Illinois. As campuses become more permanent and as existing ledger accounts are refined, future studies may avail themselves of such techniques. This interim study used only a student credit hour factor as a base from which to prorate both departmental and institutional expenditures.

The identification of expenditures, the decision as to which should be included and excluded, and their assignment to some measure of the educational product are complex and interrelated processes. The California and Western Cost and Statistical Study for 1954-55 indicated that inter- and intra-institutional comparisons require a complete description of all factors that create an educational environment for various numbers of students. The report indicated that economists have named such constellations of factors the "production function" of the environment:

> In developing the production function data it is necessary to begin with a basic unit of instruction: the individual class or section. To produce, for example, a class in English for a given number of students a certain combination of elements is required: a professor's time devoted to instructing the class; a specified amount of clerical and other assistance; supplies and similar necessities defined as to kind and amount; a certain number of hours use of a classroom; and a great many other elements such as library facilities, which contribute significantly to the environment for learning outside the classroom.
>
> One of the most useful aspects of the production-function data is that their use permits intelligent projections into the future with respect to changed enrollments under the same policy of instruction, and comparison of existing policy with proposed changes in policy. (California and Western Cost and Statistical Study, 1954-55, p. 95)

It is toward this end, the identification of the many factors and their costs which contribute to the learning environment specifically on a section basis, that this current study has been devoted.

Cost Studies - Variables and Interpretation

While cost studies are essential in tying educational resources to the students served and the services provided, they are, and have also been used as, relative measures of efficiency and cost-effectiveness. In this regard many positive and negative opinions have been expressed as to their validity and accuracy. It is appropriate therefore at this time that a portion of this review be devoted to the variables which affect cost studies and their interpretation.

Costs computed on the basis of operational expenditures should not of course be compared with costs which have been computed utilizing both operational and capital expenditures. As indicated in the California and Western Cost and Statistical Study for 1954-55, each of the above bases can be effectively utilized. Costs based upon operational expenditures can be used to justify and allocate resources necessary to yearly operation. Costs based on total expenditures may be particularly useful in the justification of funds necessary to the expansion of an institution. Only operational costs, as defined, will be included in this study.

The California and Western Cost and Statistical Study for 1954-55 also indicated that unit costs tell little in themselves. Of great importance is an understanding of the factors which affect unit costs such as the ratio of students to staff, the total volume of teaching activity, the student mix or composition of the student body, and the method of instruction. The study indicated that unit costs can most easily change by changing the ratio of students to staff in any specific subject field. The study further indicated that the total volume of teaching activity, if extremely low, prevents increases in class size or teaching load, that the cost per student is affected not only by the number of students but by the composition of the student body, and most importantly that teaching salaries do not seem to be significantly related to the cost per student. The study further indicated that the method of instruction definitely affects costs and that this influence is in terms of class size, teaching load, and other factors bearing upon unit costs. While supplemental expenditures may be significant factors in the overall expenditures necessary to the offering of a particular subject field, in general, they show no relation to teaching salary costs.

The California and Western Cost and Statistical Study also indicated that any single unit cost figure developed in any study of costs can only be the cost of creating a particular learning environment for a given number of students in a given situation. The derived cost figure is historical in nature and should be regarded as such. While certain gross comparisons of costs among institutions may be made, consideration should be given to the question of similar learning environments. The intelligent comparison among different institutions requires an analysis, as illustrated above, of the factors affecting unit costs. Such factors are the very reason for conducting unit cost studies and are meaningful in themselves even without the further development of unit cost figures.

Lawler (1955) indicated that either relatively high costs or relatively low costs may or may not indicate the quality of instruction. He stated that relatively high cost units may indicate that top level staff members are used in teaching the majority of courses offered but that high costs may also be considered as an indication of inefficiency. Low costs, however, do not necessarily indicate low quality instruction.

They may in fact be considered as an indication of efficiency. While high unit costs are generally associated with quality instruction, such generalizations may or may not be well founded. A complete analysis of the many factors and variables which affect unit costs, many of which are not cost related but based upon the evaluation of educational objectives, should be used in the determination of quality instruction. As an example, consider the cost for each student derived from the interested, qualified and low paid graduate assistant as compared to the uninterested, over-qualified and high paid full professor. Costs in such a situation do little to determine the quality of instruction.

This chapter has presented a selected review of the literature to: (1) establish the need for accurate data necessary for the accountability and allocation of resources, (2) describe some of the approaches currently used for decision making, planning, and resource allocation, (3) emphasize the importance of a coordinated data collection and processing system, (4) identify various measures of the educational product, (5) introduce different assignment and allocation techniques as determined by the educational product to which expenditures are to be assigned, (6) describe expenditures which may or may not be included in the computation of costs and their treatment, and (7) identify some of the considerations necessary to the interpretation of unit costs.

While this review may be somewhat oriented toward cost analysis techniques and studies, it should be emphasized that such studies form the essential component in tying resources to the services and students for which they were intended. Moreover, a coordinated data collection system provides for more than the accountability of funds and includes the collection of data which are essential to basic cost-effectiveness studies, cost-benefit studies, and planning and decision making at the local, state and national levels.

CHAPTER III

PROCEDURES AND METHODS

It is the purpose of this chapter to describe procedures used for data acquisition and to assign costs, reimbursement, and tuition. At the initiation of this study, instruments were designed to collect the required data at the level of refinement deemed necessary for the proposed system. These instruments proved valuable for discussion purposes with junior college personnel; however, in view of the different kinds and amounts of information available in various formats, the instruments were not used to record data from the institution source documents. Primary considerations leading to this decision were (1) the desire to use data provided in the existing junior college data system for processing apportionment claims and (2) the elimination of a superfluous step in transcribing the data from an existing source document to a newly designed format before card punching. The remaining sections of this chapter describe selection of the cooperating junior colleges, formats of the available data, the procedures used to assign and allocate expenditures to measures of the educational product, and identification of reimbursement and tuition on a section basis.

Selection of Institutions

Five institutions were selected from publicly supported Illinois junior colleges to provide a sample where all parts of the system model could be tested. The five institutions were selected on the basis of: (1) geographical location, (2) size, (3) breadth of vocational offerings, (4) availability and diversity of data, and (5) willingness to cooperate in the study.

The geographic location of the institutions ranged from a rural junior college in south central Illinois to a metropolitan junior college located in the west central part of the State. Size of the institutions ranged from approximately 2,200 to 6,000 full-time equivalent (FTE) students. All of the institutions offered programs in the five major areas required for full approval of their local plan by the Division of Vocational and Technical Education.

Each of the institutions provided necessary data from records concerning the 1969-70 fiscal year. The records varied among each of the participating institutions in terms of established budget categories, the means of assignment of faculty loads, and the format of section data. The problems encountered in preparing the existing data for operation within the system developed for this study typify the problems which would be encountered during the implementation of a state-wide system.

Each institution offered day and evening courses taught by both full- and part-time faculty members. In some cases the instruction of courses was shared by two or more instructors, and four of the five institutions employed full-time faculty on an overload basis. Enrollment and general ledger data as kept by each institution varied in refinement and format. Enrollment data and course offerings were provided in typed form, computer printouts and on punched cards. Fiscal data were obtained in formats which varied from manually kept general ledgers to printout forms and budget analyses generated by computer. In some cases, the data lacked the desired refinement but were used in this study to (1) represent the diversity of available data to be considered in the design and implementation of an automated data processing system and (2) as a base from which to make recommendations for refinement necessary for the provision of accurate data.

Expenditure Identification

Data used for computation and analysis in this study were based only upon operational expenditures. Capital expenditures normally incurred for the purchase of equipment or facilities, or rental charges incurred in lieu of equipment or facility purchases have been identified but omitted from the calculations and analyses contained herein. Omitted capital expenditures were typically incurred for the acquisition and replacement of equipment at the departmental level; and facility, interest, and land procurement were incurred at the institutional level. Facility and computer rentals supplanting capital expenditures have also been omitted from cost computation and the presented data.

The exclusion of capital and capital supplanting expenditures must be emphasized in that (1) the section and discipline costs computed in this study do not reflect the total expenditure of the institutions during fiscal 1969-70 and (2) in some instances, notably data processing, individual discipline costs would be appreciably higher if charges such as computer rental had been included in section and discipline calculations.

The following sections describe the identification of instructional and non-instructional salaries, departmental support expenditures, and institutional expenditures.

Salary Identification

For the purposes of this study, salaries were grouped into two major categories: (1) primarily teaching with some released time for administration, counseling, curriculum development, etc., and (2) all other salaries, such as those for general administration, full-time counseling, maintenance, clerical, etc. Salaries in the latter category will be discussed in a following section concerned with institutional expenditures.

Salaries in the former category (i.e., those primarily for teaching) were further subdivided into the following sub-categories:

(1) full-time faculty whose primary responsibility was teaching

(2) full-time faculty assigned a teaching responsibility but who also received a reduced teaching load to compensate for responsibilities in such areas as administration, counseling, curriculum development, etc.

(3) full-time faculty who also taught a course or some portion of their assignment on an overload basis

(4) full-time faculty teaching on a shared instruction basis

(5) part-time faculty

Four of the five institutions selected for this study were able to provide salary information and faculty loads according to the above classifications. The remaining institution provided basic source documents which were used to determine equivalent data.

The procedures used to identify instructor salaries according to the above listed classifications from the source documents at the one institution where they were not available will be presented in the following paragraphs for a twofold purpose: (1) to illustrate the time consuming process necessary for the identification of data when it is not readily available from existing records and (2) to describe the procedures used for salary identification at this institution for the purposes of this study. Emphasis is not placed upon the lack of, or availability of, data from current records but toward the importance of informing colleges of data needs if future cost analysis studies are to contain sufficient refinement in expenditure identification without being burdensome to the participating institutions.

The source documents provided by this institution were (1) the institutional payroll ledger for fiscal 1969-70, (2) the rate of pay for courses taught on a part-time, overload, and summer basis, (3) College Board Meeting Minutes identifying persons teaching on an overload or part-time basis, and (4) the summer teaching schedule.

The College Board Meeting Minutes pertaining to part-time and overload assignments were recorded on a monthly basis. Assignments for any given quarter were approved over several consecutive months. The Board Meeting Minutes indicated the instructor, the area of assignment, and the salary, but not the course(s) taught. College personnel gleaned other existing records to provide the course or courses taught by each instructor. This paragraph describes only overload and part-time instruction.

A complete description of Summer offerings was also made available. The listing was in order of administrative divisions of the college and contained all necessary section and instructor information with the exception of salary. Salaries were then assigned to each course at the summer rate of pay.

Punched cards for all credit courses taught during the three quarters corresponding to the academic year and the Summer session were provided to the investigator. From a listing which was alphabetized by instructor name, the Dean of Instruction identified those individuals granted reduced teaching loads due to responsibilities for administration.

The payroll ledger listed the monthly salary paid to each employee of the institution and the total salary paid to him during fiscal 1969-70.

Monthly salaries fluctuated according to whether or not the instructor taught on an overload basis. Instructional personnel were also allowed the option of selecting twenty or twenty-six pay periods. Monthly salaries could not therefore be aggregated to provide quarterly or academic year salaries. The identification of academic year salaries required the subtraction of summer and overload salaries from the total salary identified for each instructor from the payroll ledger. The academic year salary was then divided by three to identify the salary for each quarter. The proration of salaries to a course basis will be discussed in a following section concerned with salary assignment.

Departmental Expenditure Identification

Departmental support expenditures were identified from the general ledger of each institution. A comparison of expenditures according to any established classification across the participating institutions was difficult since different titles were assigned to the same or a similar expenditure by each institution. The categories of contractual and fixed charges, and rentals and services serve as examples. Only one institution used an established category for maintenance of equipment. While such expenditures were certainly incurred by the other institutions, they could not be specifically identified from the established classification systems at the other institutions.

Figure 1 represents the types of expenditures identified on a department or discipline basis by Fund at each institution. An X has been used to identify those institutions in which a particular classification was used while a blank space indicates the lack of such an established budget category.

ILLUSTRATION 1

Budget Category by Fund	Institutions A	B	C	D	E
Education Fund					
Supplies	X	X	X	X	X
Contractual	X	X		X	
Travel	X	X		X	
Equipment			X	X	
Rentals				X	
Maintenance of Equipment		X			
Fixed Charges			X		
Services			X		
Other				X	
Site and Construction Fund					
Equipment	X	X			X

A table for each institution which identified the amount of expended in each discipline or department for each of the categories available and as shown is included in Appendix A, Departmental Supplementary Expenditures.

The general ledgers at institutions B and C were kept manually. The lack of refined discipline or department breakdowns at these institutions is compared to the more detailed, computer generated general ledger data of institutions A and D. Institution E reported a breakdown by discipline but identified only supply expenditures at this level. The assignment of identified expenditures utilizing the student credit hour ratio will be presented in a following section, Assignment and Allocation of Expenditures.

Institutional Expenditure Identification

All operational expenditures which could not be identified to a specific department or discipline were included in this study as operational institutional expenditures. Included within this category are expenditures for general administration, counseling, operation and maintenance of the physical plant, the business office, secretarial services, etc. These expenditures were identified from the year-end audited report and were sufficient for the purposes of this study which concentrated on the assignment of expenditures at the departmental level, or lower. It should be noted, however, that institutional expenditures as identified in the year-end audited report are supplemented by a more refined expenditure classification in the general ledger which describes the type of expenditures incurred (i.e., travel, contractual, supplies, capital, etc.).

For the purposes of this study, institutional capital expenditures such as facility costs, equipment expenditures necessary for general institutional administration, the business office and the library have been identified but not included in the calculated costs. None of the costs presented herein or a section, student, credit hour, contact hour, and student credit hour base contain capital expenditures and therefore do not include facility and equipment costs.

The amount of operational expenditures included in the calculations of this study and the capital expenditures or expenditures supplanting capital expenditures omitted from the calculations are identified by institution in Appendix B, Institutional Expenditure Summary.

Assignment and Allocation of Expenditures

As previously indicated, educational expenditures are directly related to the needs of the instructional program. Demands upon institutional recordkeeping, however, require that expenditures be recorded and charged according to established accounts. Cost assignment techniques in turn require that expenditures charged to accounts be assigned and allocated back to the needs for which they were incurred. This cyclical process lessens the precision in relating expenditures to those elements of the instructional program for which they were incurred. The following sections describe (1) the assignment of salaries and departmental expenditures and (2) the allocation of institutional expenditures.

Departmental and Discipline Salaries

Two methods of salary assignment were used in this study; one based upon contact hour ratios and the other upon percentages of load assigned to teaching and other activities in cooperation with appropriate administrative personnel as indicated by each faculty member.

The latter method is preferable for at least two basic reasons: (1) it allows for a more precise and equitable assignment of salary to any given activity and (2) it allows for the determination of total and average percentages of load per activity on an intra- and inter-institutional basis. Only one of the institutions was able to provide percentage information directly; it was obtained from their Faculty Assignment Reports. For the remaining four institutions, salaries were assigned on a contact hour ratio basis as described in the later section, Salary Assignment.

Full-time Teaching Load. All of the participating institutions indicated that a range of from 14 to 16 credit hours per semester or quarter was normally carried by each full-time instructor. Each institution also indicated that the load took into account the total contact hours which were in turn prorated to a normal full-time credit hour load. For example, a teacher of English might teach a total of 15 contact hours which were directly equivalent to 15 credit hours whereas a teacher in an occupational area might teach 18 contact hours which produced 14 credit hours. The differences in total contact hours and total credit hours are brought about by the different methods of prorating lecture, laboratory and discussion contact hours to a credit hour equivalency.

The proration of contact hours to a full-time credit hour load differed among the participating institutions. At one institution two contact hours of a laboratory class were equated to one credit hour while at another institution, operating within a union contract, a more comprehensive plan for equating contact and credit hours was identified. At this institution not only was the nature of instruction taken into consideration but the equating scheme relied upon the enrollment in each particular section. For example, lecture sections with fifty or less students were converted on a one (contact hour) to one (load credit hour) basis. For those classes with an enrollment over 50 the contact hour to credit hour ratio was 1 (contact hour) to 1.3 (load credit hour). A schedule was also available for laboratory and discussion group sections.

A third institution allowed one load credit hour for each two laboratory contact hours in the Applied Arts and Sciences and three load credit hours for every four laboratory contact hours in the Baccalaureate area. The two remaining institutions formulated the total teaching load on the basis of contact and credit hours assigned to each course. In the case of multiple laboratory sections, appropriate contact hours were assigned to each laboratory section. At these institutions an instructor's load might, for example, consist of 14 credit hours and 20 contact hours. Each of these systems could be easily converted to a reporting base of percentages.

Salary Assignment. One of the institutions provided salary information which indicated the amount paid to each faculty member for each quarter of service. Also provided on the basis of quarters were the responsibilities of each faculty member including both instructional and non-instructional assignments. This information was provided on a Faculty Assignment Report Form which also indicated the percentage of load assigned to each activity. These percentages were then applied to the total salary for each quarter to obtain the dollar amount assigned to each activity.

For the remaining four institutions, the contact hour ratio was used as the base of assignment. One of these institutions provided the contact hours assigned to each course. For the other three institutions, the investigator, as directed by college personnel, determined the contact hours for each section from the college catalog. In the case of split section assignments such as a laboratory-lecture class where a lecture section was coupled with several laboratory or discussion sections, the appropriate number of contact hours, based on the nature of instruction, were assigned to each section.

For example, a five credit hour laboratory-lecture class might normally meet seven contact hours. Three contact hours would be assigned to the lecture and four to the laboratory. In some cases such a class was offered with one lecture session and three laboratory sections. Three contact hours were assigned to the lecture section and four contact hours to each of the laboratory sections. In this example, one five credit hour course comprised the total fifteen contact hour teaching load of the instructor.

Once contact hours were assigned to each course and section, total contact hours for each full-time teaching instructor on a quarter or semester basis were computed. The ratio formed by the contact hours assigned to each section to the total contact hour teaching load of the instructor was then applied to the salary identified for that quarter providing the dollar amount assigned to that section.

For persons who held a split assignment of teaching and other activities, dollar amounts were provided by each institution for the non-instructional activities such as administration, counseling, curriculum development, etc. Dollar amounts for the non-instructional activities were subtracted from total quarterly salaries thus identifying the remaining amount to be allocated among contact teaching hours as described above in the assignment of full-time teaching salaries.

Two procedures were used in the assignment of salaries where instruction was shared by two instructors. Two of the institutions provided the dollar amount of each instructor's salary to be assigned to sections taught on a shared instruction basis. Sections taught on a shared basis at the remaining institutions were considered a normal part of the instructor load by the institutions and each instructor received the contact hours normally assigned to the section. Salary assignments for shared instruction sections of the institution providing percentages were assigned to that portion of the total quarterly salary indicated by the percentage assigned to the section by each instructor.

Part-time and overload salaries were generally identified on a section basis and therefore did not require special assignment techniques. However, in the case of several instructors at one institution, overload salaries were identified only as a total for the quarter. At this institution, some of the overloads comprised a fraction of the contact hours assigned to any section or could not be identified to a particular section. In these instances, the total salary, overload and regular, was assigned on a contact hour basis to all sections taught by the concerned instructor during that quarter.

Salaries identified for administration, counseling, curriculum development, etc. were considered as indirect salaries and assigned to all student credit hours of the appropriate department or discipline.

Departmental Expenditure Assignment

Operational department or discipline expenditures were assigned to each section on a student credit hour basis. The assignment procedure considered only operational expenditures, and equipment expenditures were not assigned to student credit hour costs. The classification of expenditures for each discipline or department are presented by institution in Appendix A, Departmental Supplementary Expenditures.

For computational purposes two categories of operational expenditures were formed: (1) supplies and (2) all other operational expenditures. Appendix I identifies the amounts assigned to each discipline or instructional area. Sections were codes according to the existing ledger accounts identified in Appendix A. All student credit hours for each code were then totaled and divided into the total expenditures identified for that code thereby providing a cost per student credit hour. This cost per student credit hour was then multiplied by the number of student credit hours of each section assigned to that code providing the departmental cost for each section.

Institutional Expenditure Allocation

Institutional expenditures were also allocated to each course and section on a student credit hour basis. As presented in the Institutional Expenditure Identification section of this study, all operational expenditures not identified as departmental salaries or support expenditures were considered as institutional expenditures.

The total dollar amount identified as institutional expenditures was divided by the total number of student credit hours offered at the institution thereby providing the institutional cost per student credit hour. It should be noted that student credit hours as referred to in this study are based upon mid-term enrollment. The mid-term enrollment identifies the half-way point between initial and final enrollments which usually differ. Further, monies provided to the college by the Junior College Board and the Illinois Division of Vocational and Technical Education are also based on student credit hours generated from mid-term enrollment. The institutional cost per student credit hour as cited above was then multiplied by the number of student credit hours of each section resulting in the institutional expenditure per section.

Enrollment Data

Instruments were originally designed to collect all necessary data on a section basis. As presented in the introduction to this chapter, preliminary discussions with personnel of the participating institutions and the Junior College Board staff indicated that (1) much of the required data were available in various formats for each college, and (2) some of the data were available from a system being implemented by the Junior College Board. The investigator, therefore, assumed the responsibility for gleaning the data from various source documents and converting them to a common format suitable for automated data processing. The following sections briefly describe the format of acquired data and the preparation necessary for system processing.

Course Abbreviations and Numbers

One of the five institutions which was operating without the assistance of data processing equipment did not use course abbreviations during the fiscal 1969-70 period. Without exception, some of the course abbreviations and numbers used by each institution did not correspond to those submitted to the Illinois Junior College Board for their automated reapportionment system. With the assistance of college personnel, descriptive course titles provided in the Junior College Board system, and use of college catalogs, new master cards were prepared with course abbreviations and number matching those used during the 1969-70 fiscal year. In some cases, multiple master cards were prepared for a single section since the course abbreviations and numbers changed during the year.

Discipline Codes

Discipline codes as used in this study refer to instructional areas identified in the Illinois Junior College Board Unit Cost Study and the U.S.O.E. Coding System for reporting enrollment data concerning occupational students. While the format and categories of both systems are similar (6 digit numerical code), the actual numbers assigned to an instructional area differ for the following reasons.

The discipline code used by the Illinois Junior Colleges describes offerings in the areas of (1) Baccalaureate or Transfer, (2) Occupational, (3) General Studies, and (4) Adult and Continuing Education. The coding used for Baccalaureate or Transfer programs was adopted from the coding system used in Illinois universities. Codes for General Studies and Adult and Continuing Education were developed by the Illinois Junior College Board, since such courses are not typically offered by universities. The Occupational coding system currently used by the Illinois Junior College Board and the Division of Vocational and Technical Education was adopted from the U.S.O.E. Occupational Coding System in use during 1967. Since that time, the U.S.O.E. Occupational Coding System has added new categories and changed some of the numerical designations. The Illinois Junior College Board classification system has remained unchanged while that used by the Division of Vocational and Technical Education has been updated to reflect the changes in the U.S.O.E. Occupational Coding System.

Several cautions in the use of the established Illinois Junior College Board code for Occupational offerings should be considered in that: (1) courses may be incorrectly assigned to specific U.S.O.E. Occupational Codes or discipline codes, (2) the same or similar courses may not be assigned to similar codes across reporting institutions, and (3) there is an incompatibility in numerical coding and classification between the Illinois Junior College Board System and the U.S.O.E. Occupational Coding System.

It would seem that the incompatibilities between the Junior College

Board System and the U.S.O.E. Occupational Coding System could be relatively easily eliminated through articulation between the Illinois Junior College Board and the Division of Vocational and Technical Education. The correct and consistent assignment of courses to specific Occupational codes, however, is more difficult. To obtain correct assignment, articulation is again necessary but between the persons responsible for the assignment of courses at the local institution and representatives of the Division of Vocational and Technical Education and the Junior College Board.

Persons at the local level are the most knowledgeable as to the content of courses taught at the institution while representatives of the Division of Vocational and Technical Education and the Junior College Board are cognizant of content requirements of particular Occupational or discipline codes. In addition to the correct assignment of courses, Division and Board representatives at the same time should be responsible for consistent assignments across reporting institutions.

While some limitations in the assignment of courses to existing codes was identified, the decision was made to use discipline code assignments as provided by the reporting institutions with the exception of updating the numerical codes and classifications utilized by the Illinois Junior College Board to match the current U.S.O.E. Occupational Coding System as used by the Division of Vocational and Technical Education. This decision was made primarily due to the limitations of time and resources devoted to this study and in view of other more important considerations for developing the system.

Credit Hours

In some cases the credit hours assigned to a course as obtained from the participating institutions differed from those submitted to the Illinois Junior College Board system. This difference was the result of minor course changes during the period of time from fiscal 1969-70, from which the data were collected, to early in 1971 when master cards were obtained for the Illinois Junior College Board Reapportionment System. In cases where credit hour discrepancies were identified, the credit hours assigned to the course during fiscal 1969-70 were used in this study.

Mid-term Enrollment Based Upon Reapportionment Claims

The proposal for this study stipulated that mid-term enrollment as submitted to the Illinois Junior College Board would be used for the calculation of student credit hour costs. These data proved inadequate for use in the study in view of the limitations listed below:

1. In the majority of cases such data were available only on a course basis and section enrollments could not be discerned.
2. Available data did not identify the instructor teaching each section thus preventing the calculation of student credit hour costs based upon salary.
3. The reapportionment data did not identify contact hours, time of offering, type of instruction, and other classifications necessary to the tabulation and analyses of this study.

Data from the participating institutions used to prepare reapportionment claims were also used in this study. In addition to mid-term enrollments, the data format identified at least the instructor(s) teaching each section. Information describing the type of class, level of offering, time offered, etc., was available from either supplementary listings or the college catalog.

Designed Enrollment

The proposal of this study stipulated that section costs were to be computed on the minimum, desired, and maximum enrollments of each section. Discussions with junior college personnel indicated the lack of minimum and desired enrollment standards. To a large degree this lack was attributed to the newness of many programs. It was further determined that accurate minimum and desired enrollments could not be identified on the basis of current program development.

Maximum enrollments were available since they served the purpose of limiting class size during the registration period. Each of the institutions provided a listing of maximum section enrollments, but some courses at each institution were omitted from the listings. The maximum enrollment for those courses not identified in the original listing was derived by (1) further consultation with personnel at each college or (2) in the more obvious cases the maximum enrollment of a course similar in nature of instruction and level of offering was assigned.

Level of Course Offering

Three of the five participating institutions identified courses according to a freshman-sophomore classification. It is important to note that the courses were most often offered at the freshman or sophomore level but, in actual practice, a course at either level could be taken by freshman or sophomore students. Two of the institutions while providing a sequence of courses in their college catalog maintained that any course could be taken by either a freshman or sophomore student who had met prerequisites and were, therefore, unwilling to provide a freshman-sophomore classification.

The apportionment system being implemented by the Illinois Junior College Board identified General Studies courses and those offered on an Adult and Continuing Education basis. The identification of courses according to the above categories was, therefore, possible for all institutions.

Nature of Instruction

Six categories were established to identify the nature of instruction for each section: (1) lecture, (2) laboratory, (3) independent study, (4) practicum, (5) discussion, and (¢) laboratory-lecture. Each course was identified within the classification system according to the college catalog of each institution. For two of the institutions, B and D, some of the laboratory-lecture courses were offered with multiple laboratory and/or discussion sections. For such courses each of the sections was coded dependent upon the nature of instruction of the particular section.

Other Categories

All institutions were able to identify the time (day or evening) at which a class was offered. The Junior College System indicated whether a course was part of a certificate or degree program and also whether a class was offered as Transfer or Baccalaureate, Occupational, General Studies, or Adult and Continuing Education

Junior College Board and Division of Vocational and Technical Education Reimbursement

With the exception of certain adult education classes, the junior colleges received reimbursement from the Junior College Board for all courses taught at the institution. In addition, each college received reimbursement from the Division of Vocational and Technical Education for many of the Occupational offerings. Both reimbursement procedures provide a dollar amount per student credit hour generated in courses approved for reimbursement.

During fiscal 1969-70 the Division of Vocational and Technical Education based student credit hour reimbursement for junior colleges upon the following factors: (1) the ability of the local district to provide monies for education as determined by the available tax base and (2) the provision of special services for disadvantaged and handicapped students. Monies for handicapped and disadvantaged students were provided in addition to monies normally reimbursed for Occupational education which was to pay for the extra services rendered to these students. In cases where no additional services beyond the normal educational offerings were provided, additional monies were not provided nor were such students to be indicated on submitted reports. Monies reimbursed for extra services to the disadvantaged and handicapped were not included in the reimbursement calculations of this study. In addition to the above, monies were also provided by the Division of Vocational and Technical Education for selected adult education classes on a contact hour basis, for equipment purchases, and for special programs.

For all courses approved by the Junior College Board, $15.50 was reimbursed for each student credit hour on a semester basis. Those institutions operating on a quarter hour basis indicated both quarter student credit hours and the equivalent semester student credit hours. Claims for reimbursement were submitted on the Apportionment Claim Form designed for this purpose. These forms were to be supported by course enrollment data. However, the amount of detailed information available as supporting data varied on the part of each reporting institution. For some of the institutions supporting data were not available from the Junior College

Board for the fiscal year 1969-70. Enrollment figures obtained from records of the institutions and used in this study are compared with those submitted to the Illinois Junior College Board in Appendix C, Enrollment Comparisons.

Reimbursement claims for vocational offerings were submitted to the Division of Vocational and Technical Education. The claim form required a listing of the number of students in a course by the program in which they were enrolled. This procedure required that a portion of the students in one course be indicated under one program while the remaining or other portion of the students in the same course might be claimed under another program. In some instances (e.g., Biology) only some of the students were enrolled in an approved Occupational program. Consequently only a portion of the class enrollment was claimed on the vocational reimbursement forms. In view of this procedure and the lack of section identification, it was impossible to calculate vocational reimbursement and enrollment for each section and it is therefore presented on a course basis.

The vocational reimbursement claim form was in a format different from that typically used by the colleges and submitted to the Illinois Junior College Board. The Division format made it difficult to compare vocational courses and enrollments with the data obtained from each college. Individual student data collection as described in the following chapter allows for accurate student identification and, if implemented, will eliminate many of the problems concerning the identification of students for which Vocational and Technical reimbursement is provided.

Appendix D, Vocational Enrollment and Reimbursement, presents the total amount or reimbursement identified on a course basis, the amount of reimbursement not identified on a course basis, and the amounts reimbursed for equipment and special projects.

Revenue Identification

Very little has been done in this study to identify revenue sources for the purposes for which they were intended. Exceptions may be noted in the treatment of Junior College Board reimbursement and tuition which apply equally to all students on a student credit hour basis and the additional vocational reimbursement provided on a course basis. Laboratory and other special fees associated with particular courses which were not available would reduce the net local costs of these courses.

The accurate identification of resources to services for which they were intended was not possible from available 1969-70 data and can only be obtained through the implementation of a coordinated data processing system as recommended in the following chapter.

Such a system should identify all revenue sources, public and private, including the following: (1) all federal and state monies by the agency from which they were provided, (2) tuition charge-backs for approved out-of-district students, (3) tuition for in-district students, (4) out-of-state tuition, (5) unapproved out-of-district tuition, (6) specific fees charged for certain courses (laboratory fees and fees for Adult and Continuing Education), (7) private donations, and (8) other resources as necessary. It is possible that certain courses generate greater revenue than others such that their net costs are quite small.

In this study revenue resources have been identified by fund and are presented in Appendix E, Revenue Identification, for each institution.

The identified amounts have been taken from the year-end audited report and general ledger of each institution. Appendix E also indicates the percentage of each source of revenue as it compares to the total revenue of the institution.

CHAPTER IV

DATA PRESENTATION AND ANALYSIS

This chapter deals with the presentation and analysis of data developed for use in this study. It should be noted at this time that the presented and analyzed data are presented in summary form and comprise only a small portion of the total data collected for this study. Summaries for the major areas of Baccalaureate, Occupational, General Studies, and Adult and Continuing Education will be provided for each institution in addition to weighted averages compiled on an inter-institutional basis. Data from selected discipline and occupational codes are also presented to illustrate the wide differences in enrollment and the resulting costs in the major areas. In turn, selected section data are presented to illustrate their effect on discipline enrollment and cost.

The summary data presented within this chapter are supported by discipline and occupational data presented in Appendices I, J, and K. The original data upon which the analyses and appendices are based and the programs used to generate the data are on file with the Research and Development Unit, State Division of Vocational and Technical Education, Board of Vocational Education and Rehabilitation, of the State of Illinois.

The reader interpreting these data should be aware that they are historical in nature and that they represent specific circumstances at each of the given institutions. As illustrated in the review of literature, rash interpretations as to the cost and quality of education should not be attempted. Evaluations on a cost and enrollment basis can only be made by examining the total learning environment at each institution.

The data are presented and analyzed here to illustrate the differences in enrollment and costs, and the many factors which must be taken into consideration for proper resource allocation.

Generated Reports

Nine separate reports were developed from the collected data to identify specific variables affecting costs and to establish a relationship between the computed costs and selected operational resources. These nine are examples of the many types of reports that could be generated by the system. The following is a listing and description of the developed reports which are illustrated in Appendix G of this study:

(1) Faculty Load by Instructor - This report identifies all activities of each instructor on a quarter or semester basis. Totals for each of the variables (duties, costs, and measures of educational product) are also provided on a quarter or semester and yearly basis.

(2) Cost Detail by Section - This report identifies expenditures such as direct salary, indirect salary, supplies, other departmental or discipline expenditures, and institutional expenditures on a section basis. In addition, costs per course, credit hour, mid-term and maximum enrollment, and mid-term and maximum student credit hours are presented.

(3) Cost Detail by Discipline or Occupational Code - This report provides information identical to that indicated above for Report 2, but uses the discipline or occupational code instead of the course abbreviation as a basis of aggregation.

(4) Cost and Enrollment Detail by Section - In addition to costs per course, credit hour, mid-term and maximum enrollment, and mid-term and maximum student credit hour, this report indicates the actual number of students enrolled at mid-term and the projected maximum number of students which could be accomodated in a given section. An abbreviation of the course title is also provided, and aggregations are provided on a section basis.

(5) Cost and Enrollment Detail by Discipline or Occupational Code - The data presented in this report are essentially the same as that for Report 4, except that data are aggregated on the discipline or occupational code basis instead of by course abbreviation.

(6) Cost and Reimbursement Detail by Course - This report on a course basis identifies mid-term enrollment, total operational costs, and revenue from the Junior College Board reapportionment, vocational enrollment, Division of Vocational and Technical Education reimbursement, and tuition. In addition, the report provides a total for these three revenue sources, a cost to the local district, and identifies on a student credit hour basis, total operational cost, revenue based on the three previously identified sources, and a local district cost.

(7) Cost and Projected Revenue Detail by Course - This report is essentially the same as Report 6, with the exception that revenue projections are based on the maximum number of students which could be accomodated in each section. While the cost figures remain unchanged, revenue received on the maximum amount of student credit hours. Since the total amount of dollars for reimbursement received from the Division of Vocational and Technical Education has remained relatively unchanged, projections of increased revenue on a student credit hour basis for this resource were not included in the projected maximum total operational and local district costs.

(8) Cost and Resource Detail by Discipline or Occupational Code - This report displays the same data as Report 6 except that totals are provided on a discipline and occupational code basis instead of by course abbreviation.

(9) Cost and Projected Resource Detail by Discipline or Occupational Code - This report displays essentially the same data as Report 7, but provides totals on a discipline and occupational code basis instead of by course abbreviation.

Prior to the development of programming necessary for generating the desired reports, extensive data checking routines were implemented. In addition to validating various codes and cards for system operation, the checking routines provided totals which could be compared with totals provided by the general ledgers and the year-end audited reports.

For example, all section cards of a given quarter for each instructor were matched against the instructor's salary card for that quarter. The checking routines matched all cards and indicated either a section card which did not have a matching instructor salary card(s), or a salary card which did not have a matching section card(s). While salaries were printed as part of the checking routines, their accuracy could not be routinely verified by the system and they were, therefore, visually compared with payroll source data; complete checking routines can be programmed into the proposed system. Similar automated checking procedures for all coded data and cards were an integral part of the checking routines. The report generating programs depend upon internal automated checking procedures to product reports with a high degree of accuracy.

Data Presentation and Analysis

The remaining sections of this chapter will be devoted to the presentation and analysis of the data developed in this study. The chapter is organized into five major sections describing: (1) the effect of salaries, (2) the effect of supplemental expenditures, (3) the effect of enrollment, (4) a comparison of total costs, and (5) a comparison of costs and selected resources.

The Effect of Faculty Salaries on Costs

In determining the effect of faculty salaries on some measure of the educational product, such as the student credit hour, consideration should be given to the following: (1) the overall rate of pay at the institution, (2) the rate of pay for over-time and part-time instruction, (3) the distribution of direct and indirect salaries, and (4) the amount of salary assigned to each contact and credit hour.

Each of the participating institutions indicated that a range of fourteen to sixteen credit hours comprised the normal faculty load for each quarter or semester and also indicated that, while the number of actual contact hours was typically higher, the load fluctuated greatly according to the nature of the specific course offerings. Faculty who were formally assigned responsibilities for administration, student advisement and counseling, curriculum development, or other activities were granted a reduced teaching load, but the total of all assigned activities was equated to the normal full-time teaching load of fourteen to sixteen credit hours. The assignment of faculty salaries on a contact hour basis to duties performed is a well-accepted technique; however, it has several limitations in that it ignores the differential time necessary for preparation and student evaluation, and does not consider teacher-student ratios on a section or total instructor load basis. However, since direct data identifying the activities assigned to each faculty member on a percentage of total load basis were not available, the contact hour basis of assignment was utilized in this study. Contact hours could be determined on a relatively accurate basis and no other uniform means of assignment was available.

Appendix G, Report 1, of this study illustrates the type of data which were obtained describing the various activities of each teaching faculty member and the types of calculations which are possible utilizing various measures of the educational product. Limitations of time and money prevented generating examples of the various summary reports from the data illustrated for the individual faculty member. However, illustrations from specific instructor load assignments indicating the limitations of the contact hour method of assignment will be presented in addition to an analysis of salary data on a credit and contact hour basis. Analyses will also be provided indicating the percentage of total budget devoted to full-time, part-time, and overload instruction and their representive costs per credit and student credit hour.

For example, one of the institutions identified an instructor teaching a five-credit hour course in biology. His actual 21-hour contact load was distributed among three discussion groups, four laboratory sessions, and one lecture session. The instructor-pupil ratio for this five-credit hour course was 1 to 58. In comparison, the teaching load of an instructor in physical education was comprised of nine credit hours and 16 contact hours devoted to one lecture and seven laboratory sections. The total instructor-pupil ratio in this case was 1 to 140.

The assignment of direct teaching activities and indirect instructional activities such as administration, counseling, etc., varied within and among the participating institutions. In one instance, a half-time administrative position carried with it a seven-credit and 12-contact hour load and an instructor-pupil ratio of 1 to 93. In another instance, a similar administrative position at a different institution was accompanied by a five-credit and nine-contact hour load with an instructor ration of 1 to 7.

While a 14 to 16 credit hour load for full-time teaching faculty was voiced by each of the institutions, it appeared that actual assignments were dependent upon type of instruction, individual instructors, competencies, institutional needs, and student flow.

Tables 1 through 4 describe direct teaching, administrative, counseling, and other salaries assigned to credit and contact hours. Each table respectively describes the Baccalaureate, Occupational, General Studies, and Adult and Continuing areas of instruction. While direct, administrative, and counseling salaries may be easily identified and categorized, other activities ranging from curriculum development to the supervision of cheerleading have been grouped and presented under the heading of Other. The remaining heading, Total, represents all salaries identified at the department level or lower. Further information concerning the assignment of salaries on a section basis according to discipline and occupational codes is reported in Appendix I of this study.

Each dollar amount in Tables 1 - 4 represents a weighted average for the category indicated by the row and column headings. For example in Table 1 presenting the baccalaureate salary distribution all baccalaureate credit hours for institution A were divided into the total direct baccalaureate salary for the institution. All baccalaureate credit hours were then separately divided into identified salaries for Administration, Counseling and Other respectively providing the average administrative, counseling, and other salary cost per credit hour. The same procedure was repeated on a credit and contact hour basis for each of the other institutions. The Average for all institutions was obtained by adding all credit hours of the five institutions and dividing them into the total dollars of each of the categories identified by the columnar headings providing a weighted average. The same procedure was applied to tables 2 - 4.

Contact hours represent the amount of instructional time and are greater than the number of credit hours; therefore, salaries assigned to the contact hour are lower than those assigned to the credit hour for all major areas of instruction. The highest cost per credit hour based on salary was found in the Occupational area ($389.99) followed very closely by the General Studies area ($388.84) and the Baccalaureate area ($372.02). The lowest salary cost per credit hour was recorded in the

TABLE 1

DIRECT AND INDIRECT BACCALAUREATE SALARY DISTRIBUTION BY CREDIT AND CONTACT HOUR BY INSTITUTION

Institution		Direct Salary	Admin.	Couns.	Other	Total
A	Credit Hour	254.66	10.50	9.21	11.49	285.88
	Contact Hour	224.35	9.25	8.11	10.12	251.85
B	Credit Hour	432.81	19.60		2.32	454.75
	Contact Hour	352.45	15.96		1.89	370.32
C	Credit Hour	339.28	15.18		2.94	357.41
	Contact Hour	325.07	14.54		2.82	342.44
D	Credit Hour	374.68	18.95	.43	9.04	403.11
	Contact Hour	305.65	15.46	.35	7.37	328.85
E	Credit Hour	310.14	16.65			326.80
	Contact Hour	268.76	14.42			283.19
AVERAGE	Credit Hour	348.19	16.58	1.85	5.39	372.02
	Contact Hour	297.00	14.14	1.58	4.59	317.33

TABLE 2

DIRECT AND INDIRECT OCCUPATIONAL SALARY DISTRIBUTION BY CREDIT AND CONTACT HOUR BY INSTITUTION

Institution		Direct Salary	Admin.	Couns.	Other	Total
A	Credit Hour	261.69	22.89	15.79	3.54	303.93
	Contact Hour	191.12	16.72	11.53	2.58	221.98
B	Credit Hour	393.54	19.36			412.90
	Contact Hour	344.98	16.97			361.95
C	Credit Hour	286.19	31.78			317.98
	Contact Hour	239.10	26.55			265.65
D	Credit Hour	398.31	23.55	6.59	8.68	437.15
	Contact Hour	256.36	15.16	4.24	5.58	281.35
E	Credit Hour	372.64	15.23			387.87
	Contact Hour	229.30	9.37			238.67
AVERAGE	Credit Hour	360.53	20.83	5.10	3.52	389.99
	Contact Hour	248.51	14.35	3.51	2.42	268.81

TABLE 3

DIRECT AND INDIRECT GENERAL STUDIES SALARY DISTRIBUTION BY CREDIT AND CONTACT HOUR BY INSTITUTION

Institution		Direct Salary	Admin.	Couns.	Other	Total
A	Credit Hour	288.80	9.15	3.85	9.57	311.38
	Contact Hour	257.63	8.16	3.43	8.54	277.77
B	Credit Hour	561.54	5.10			566.65
	Contact Hour	446.99	4.06			451.05
C	Credit Hour	256.66				256.66
	Contact Hour	256.66				256.66
D	Credit Hour	372.41	20.44	.07	7.00	399.93
	Contact Hour	335.93	18.44	.06	6.32	360.76
E	Credit Hour	321.68	3.04			324.73
	Contact Hour	321.68	3.04			324.73
AVERAGE	Credit Hour	369.28	13.22	.83	5.49	388.84
	Contact Hour	332.20	11.89	.75	4.94	349.79

TABLE 4

DIRECT AND INDIRECT ADULT & CONTINUING SALARY DISTRIBUTION BY CREDIT AND CONTACT HOUR BY INSTITUTION

Institution		Direct Salary	Admin.	Couns.	Other	Total
A	Credit Hour	202.09	14.12	4.02	2.67	222.90
	Contact Hour	124.13	8.67	2.47	1.64	136.91
B	Credit Hour	185.83	22.91			208.75
	Contact Hour	161.59	19.92			181.52
C	Credit Hour	345.48	4.91			350.39
	Contact Hour	246.92	3.51			250.43
D	Credit Hour	163.36	20.22	2.29	3.65	189.53
	Contact Hour	137.66	17.04	1.93	3.07	159.72
E	Credit Hour	255.63				255.63
	Contact Hour	255.63				255.63
AVERAGE	Credit Hour	228.56	15.00	1.39	1.81	246.78
	Contact Hour	176.68	11.59	1.08	1.40	190.77

Adult and Continuing Education area ($246.78) which was more than $125 less than the next lowest cost. The low cost per credit hour in the Adult and Continuing Education area is attributed mostly to the use of part-time personnel who typically received a much lower rate of pay than a full-time faculty member teaching a similar section.

The differences between credit and contact hour costs in the Baccalaureate, Occupational, General Stuides, and Adult and Continuing Education areas were respectively noted at $54.80, $121.18, $39.05, and $56.01. These differences indicate that in the case of the Occupational offerings a great deal of actual class time, especially in laboratories, was required, much more than indicated by the credit hours assigned to a given course. The differences indicated for the remaining areas, while not as great, illustrate that the credit hour is the most useful measure of the educational product while the contact hour is the measure most closely related to the process of classroom instruction. Neither is necessarily a better measure of actual effort expended by the faculty member.

The highest cost per contact hour was recorded for General Studies offerings ($349.79) followed by the Baccalaureate ($317.33) and the Occupational ($268.81) areas respectively. The lowest cost per contact hour was reported in Adult and Continuing Education and is attributed to the greater use of part-time instructors who were typically paid at a lower rate that full-time faculty members.

It is apparent that the institutions used different procedures in classifying indirect salaries. Two institutions identified counseling salaries by area of instruction while three others did not. Due to the great variety of procedures used to make and report instructor assignments it was not possible to determine directly comparable expenditures across institutions. Reporting duties as a percentage of load would facilitate such comparisons.

The highest cost per credit hour was recorded for administrative responsibilities followed by the costs identified under the general heading "Other" which grouped various indirect activities, while the lowest cost per credit hour was reflected in salaries devoted to counseling. With the exception of Baccalaureate administrative salary costs, there does not appear to be a direct relationship between indirect salaries per credit hour and total salaries per credit hour. In the Baccalaureate area, however, the institutions having the higher administrative salary per credit hour also had the higher total salary cost per credit hour. In the other major areas of instruction, no such relationship could be inferred.

Tables 5 through 8 show the distribution of salaries and cost per credit and student credit hours according to part-time, full-time, and overload instruction. The percentages of total salary for each institution have been obtained by separately dividing the monies identified for part-time, full-time and overload salaries by the total amount of salary paid at the institution. For example in Table 6, Institution A, the dollar amount of baccalaureate salaries expended for part-time salaries was divided by the total dollar amount expended for all baccalaureate salaries providing the percentage of total salary devoted to part-time baccalaureate instruction. The same procedure was repeated for all salaries for all institutions in Tables 5 - 8. The averages indicated for each table are weighted averages in that the total of all part-time salaries in the baccalaureate area was divided by the total of all baccalaureate salaries for all institutions providing the weighted percentage for part-time baccalaureate salaries. The same procedure was repeated for full-time and overload salaries and in turn for each of the remaining tables (6 - 8).

The per credit hour and student credit hour costs were obtained by dividing the appropriate salaries by their respective credit and student credit hour. For example, in Table 5 the part-time baccalaureate salary of institution A was divided by the credit and student credit hours generated in part-time baccalaureate instruction. The same procedure was repeated for each institution (A - E), each category (part-time, full-time and overload) and for each table (5 - 8). Again all averages are weighted averages obtained by totaling appropriate salaries across institutions and dividing them by their respective credit or student credit hours.

The percentages of the total salary as assigned to each of these areas indicate a majority of the salary budget to be devoted to full-time instructional staff followed respectively by part-time and overload staff. According to major instructional areas, the Baccalaureate area utilized the largest percentage of full-time instructional staff followed respectively by General Studies, Occupational, and Adult and Continuing Education.

The Adult and Continuing Education area devoted a major portion of total salary to part-time instruction (55.79%) followed by the Occupational (15.36%), the Baccalaureate (12.66%), and the General Studies (9.39%) areas of instruction. These percentages relate directly to the nature of the offerings of each major instructional area. For example, the Adult and Continuing Education offerings were typically taught in the evening and, therefore, made use of instructors hired on a part-time basis. This arrangement also held true for many Occupational offerings which were offered for adults in the evening. Both the Baccalaureate and General Studies areas devoted relatively small amounts of total salary expenditure to part-time faculty; these offerings were typically offered to full-time day students.

A relatively small percentage of the salary budget was devoted to payment for overload instruction. The Adult and Continuing Education area devoted 3.02% of the total salary expenditure to overload instruc-which ranked highest among the four areas. It was closely followed by the Baccalaureate (2.47%), Occupational (2.59%), and General Studies (1.84%) areas.

In comparing the average data in tables 5 - 8 with the data presented in tables 1 - 4, it should be noted that the Adult and Continuing Education area recorded the lowest credit hour cost ($246.78) and also devoted the largest portion of the salary budget to part-time instructors. While the Baccalaureate, Occupational and General Studies areas did not devote the largest portion of the salary budget to part-time instruction, part-time credit hour costs were almost universally lower than full-time credit hour costs. The one exception to the above statement may be noted for Institution A in Table 8.

Cost for each student credit hour was generally lower for sections taught by part-time instructors than by full-time instructors. In the Baccalaureate are four of the five institutions had lower costs for

TABLE 5

DISTRIBUTION OF PART-TIME, FULL-TIME AND OVERLOAD BACCALAUREATE SALARIES BY PERCENTAGES AND THEIR COST FOR CREDIT AND STUDENT CREDIT HOURS BY INSTITUTION

Institution	Percentages of Total Salary			Salary per Credit Hour or Student Credit Hour					
				Part-Time		Full-Time		Overload	
	Part-time	Full-time	Over-load	Credit hour	Student credit hour	Credit hour	Student credit hour	Credit hour	Student credit hour
A	6.50	90.80	2.60	199.07	15.32	286.68	13.67	199.64	15.80
B	9.50	86.11	4.37	227.60	11.03	483.40	21.27	224.90	13.30
C	4.44	94.29	1.26	225.00	8.30	362.62	15.51	210.00	8.65
D	13.84	86.15		275.69	14.16	435.47	18.10		
E	26.51	69.48	3.99	269.80	17.77	334.54	17.84	248.62	18.05
AVERAGE	12.66	84.86	2.47	252.57	14.03	388.09	17.55	177.42	14.25

TABLE 6

DISTRIBUTION OF PART-TIME, FULL-TIME AND OVERLOAD OCCUPATIONAL SALARIES BY PERCENTAGES AND THEIR COST FOR CREDIT AND STUDENT CREDIT HOURS BY INSTITUTION

Institution	Percentages of Total Salary			Salary per Credit Hour or Student Credit Hour					
				Part-Time		Full-Time		Overload	
	Part-time	Full-time	Over-load	Credit hour	Student credit hour	Credit hour	Student credit hour	Credit hour	Student credit hour
A	6.13	89.87	3.98	216.10	17.50	298.96	24.26	205.16	15.68
B	17.25	78.91	3.83	244.87	13.99	459.54	23.36	221.45	12.68
C	5.71	91.70	2.57	221.05	15.05	317.75	21.85	210.00	8.63
D	18.29	81.70		274.83	16.33	503.76	29.12		
E	16.26	79.13	4.60	316.28	25.64	383.43	29.10	284.24	21.00
AVERAGE	15.36	82.03	2.59	272.75	17.55	410.03	26.74	241.81	16.10

TABLE 7

DISTRIBUTION OF PART-TIME, FULL-TIME AND OVERLOAD GENERAL STUDIES SALARIES BY PERCENTAGES AND THEIR COST FOR CREDIT AND STUDENT CREDIT HOURS BY INSTITUTION

Institution	Percentages of Total Salary			Salary per Credit Hour or Student Credit Hour					
				Part-Time		Full-Time		Overload	
	Part-time	Full-time	Over-load	Credit hour	Student credit hour	Credit hour	Student credit hour	Credit hour	Student credit hour
A	4.28	92.50	3.20	206.94	14.26	307.91	16.60	1238.37	34.40
B	4.78	91.66	3.54	257.14	16.21	580.70	33.52	250.00	13.42
C		100.00				256.66	10.69		
D	8.75	91.24		243.38	13.41	426.26	25.47		
E	26.10	68.65	5.23	272.59	26.13	323.64	23.77	255.32	23.91
AVERAGE	9.39	88.76	1.84	250.71	16.59	404.00	23.80	328.57	20.15

TABLE 8

DISTRIBUTION OF PART-TIME, FULL-TIME AND OVERLOAD
ADULT & CONTINUING SALARIES BY PERCENTAGES AND THEIR COST
FOR CREDIT AND STUDENT CREDIT HOURS BY INSTITUTION

Institution	Percentages of Total Salary			Salary per Credit Hour or Student Credit Hour					
				Part-Time		Full-Time		Overload	
	Part-time	Full-time	Over-load	Credit hour	Student Credit hour	Credit hour	Student Credit hour	Credit hour	Student Credit hour
A	41.94	33.78	24.26	287.24	14.00	111.67	6.46	193.99	15.35
B	90.41	4.79	4.79	198.68	11.79	200.00	10.81	200.00	4.79
C	34.19	65.80		220.56	14.72	504.79	26.99		
D	74.39	25.60		161.89	7.29	376.14	25.43		
E	100.00			255.64	63.79				
AVERAGE	55.79	41.17	3.02	190.53	9.97	366.40	20.86	195.19	13.83

part-time instruction, while in the Occupational area all schools showed lower costs for part-time instruction than for full-time instruction on a student credit hour basis. In General Studies, one institution did not report part-time salaries; the remaining institutions showed that three out of four had lower costs per student credit hour for part-time instruction while in Adult and Continuing Education two of the four schools indicated lower costs for part-time instruction. Averages across institutions indicated that in all cases part-time cost per student credit hour was less costly than full-time cost per student credit hour.

The costs for overload instruction vary among the major areas, but in all cases were less than those identified for full-time instruction on a credit hour basis. Most of the institutions participating in the study indicated that a relatively similar pay base was applied to both part-time and overload instruction. In the Baccalaureate and Occupational areas the cost per credit hour for overload instruction was less than the cost per credit hour for both part-time and full-time instruction. In the General Studies and Adult and Continuing Education, the cost per credit hour for overload instruction was less than that identified for full-time instruction but more than costs identified for part-time instruction.

While credit hour salary costs are useful in determining the overall effect of instructor load, they do not relate costs to the number of students receiving instruction. Since costs within the designed enrollment interval are relatively stable, both credit and student credit hour costs must be used to identify costs for a measure of the student product. Since current reimbursement procedures at the junior college level in the

State of Illinois are based upon the student credit hour, costs computed on this basis are useful in determining the appropriateness of current levels of reimbursement.

The institutional totals for the Baccalaureate area in Table 5, for example, indicate the cost per credit hour for part-time instruction to be $252.57 while the cost for overload instruction is only $177.42. However, when costs for a measure of the student product, the student credit hour, are considered, the part-time student credit hour cost of $14.03 is less than the overload student credit hour cost of $14.25. This illustration serves as an example of the type of analyses that can be performed from the data collected for this study. While it presents an extreme case, since the rest of the data identify high credit hour costs with high student credit hour costs, it illustrates the need for the combined comparison of these units.

Illustrations may also be drawn within or among institutions. Institutions A and B in Table 6 had part-time cost per credit hour to be $216.10 and $244.87 respectively. The cost per student credit hour, however, was inversely related to the credit hour costs in that the student credit hour cost in Institution B was $13.99 while that of A was $17.50.

The above illustrations have been presented to indicate the analyses possible from the collected and processed data. While credit and contact hour costs reflect an estimate of the teaching load as typically assigned in the junior colleges, any interpretation of such costs must be accompanied by determination of student credit hour costs to relate cost to product. Attention should also be devoted to the percentages of total salary budget which have been assigned to part-time, full-time, and overload instruction. The analysis of student credit hour costs is useful in that current reimbursement procedures are based on this unit and, as will be presented later in this chapter, it is the cost per student credit hour that is affected by the nature of instruction necessary to a particular section offering and the enrollment in the section. Also institutions differ in their policies for the use of part-time, overload, and shared instruction; and in the pay base for each as well as the minimum number of students required for offering a class.

Supplemental Expenditure Identification

Supplies, other departmental expenditures, and institutional expenditures must be included in the calculation of total operating costs for any measure of the educational product. Tables 9 - 12 identify the assignment of direct salary, indirect salary, supplies, other departmental expenditures, institutional expenditures, and total operational costs per student credit hour. It should be noted that, on the basis of existing ledger accounts, only approximately one-half of the supplemental expenditures could be identified and assigned at the departmental level or lower and that the remaining expenditures were classified as institutional expenditures and allocated to each section. Supplemental department expenditures for the purposes of this study and as identified in tables 9 - 12 have been categorized as Supplies and Other. The Supply category includes expendable items usually costing less than $25 per unit which were bought on a yearly basis. Included in the Supply category assigned to each discipline were small hand tools, metal supplies, expendable electronic components, etc. The category designated as Other includes expenditures incurred for contractual services, travel, equipment rental, maintenance of equipment, etc. Tables 9 - 12 as in the case of tables 1 - 8 have been computed on a weighted average basis. Expenditures and credit hours for each institution within the headings of direct salary, indirect salary, supplies, other, institutional expense and total operational cost were identified for each of the four major institutional areas. Each expenditure category within the instructional area was then divided by the student credit hours generated by that area.

For example, the baccalaureate supply expenditure for Institution A (Table 9) was divided by the amount of baccalaureate student credit hours providing the supply expenditure per student credit hour.

Again all averages indicated are weighted averages in that all baccalaureate supply expenditures across institutions were summed and divided by the total of all baccalaureate student credit hours providing a weighted average baccalaureate supply cost per student credit hour.

The highest student credit hour cost for Supply items was identified in the Occupational area ($1.98) followed respectively by the areas of Adult and Continuing Education ($1.44), Baccalaureate ($0.57), and General Studies ($0.09). The relatively high expenditure on a student credit hour basis for Occupational offerings as compared to Baccalaureate offerings is typically due to the laboratory instruction method necessary in Occupational programs. The relatively high expenditure per student credit hour ($1.44) for Adult and Continuing Education offerings also makes fairly extensive use of laboratory instruction where materials are used.

The highest expenditure per student credit hour based for other operational expenditures identified at the departmental level or lower was also in the Occupational area ($0.83). The occupational area was followed by Adult and Continuing Education ($0.74), Baccalaureate ($0.26), and General Studies ($0.16). Again, the nature of instruction required by each of these areas determines their needs for expenditures which are supplemental to salary requirements.

While the data presented in these tables, 9 - 12, are useful in providing an overall comparison and analysis of major program areas, it should be emphasized that there are particular disciplines or instructional areas within each of these major classifications which should also be compared and analyzed since some require relatively large amounts of supplies and other supplemental services. Some illustrations are presented below: further information is reported in Appendix I of this report on a discipline and occupational code basis.

From the data presented on a section basis in Appendix I for the Baccalaureate area, as an example, Agricultural Sciences required an average supply expenditure of $59.37 for each section; Biological Sciences required an average supply expenditure of $55.15 for each section; while the Mathematical Sciences required a supply expenditure of $9.27 per section; and the instructional area of Philosophy required a supply expenditure of only $5.78 per section.

In the Occupational area supply expenditures varied greatly. For example, a limited course offering in Recreation required a supply expenditure of $2,064.83 per section while a business offering in the area of Real Estate required only $7.16 per section. Even within related occupational areas supply expenditures varied greatly on a section basis.

TABLE 9

BACCALAUREATE EXPENDITURE DETAIL IDENTIFYING COSTS PER STUDENT CREDIT HOUR BY INSTITUTION

Institution	Direct Salary	Indirect Salary	Supplies	Other	Institutional Expense	Total Operational Cost
A	13.76	1.54	.61	.32	24.78	41.02
B	19.48	.98	.49	.11	14.06	35.13
C	14.96	.76	1.05	.05	17.71	34.52
D	17.48	1.22	.47	.45	17.13	36.73
E	17.82	.94	.44		19.43	38.64
AVERAGE	16.98	1.11	.57	.26	18.21	37.12

TABLE 10

OCCUPATIONAL EXPENDITURE DETAIL IDENTIFYING COSTS PER STUDENT CREDIT HOUR BY INSTITUTION

Institution	Direct Salary	Indirect Salary	Supplies	Other	Institutional Expense	Total Operational Cost
A	23.67	3.42	2.52	.59	24.78	54.98
B	20.88	1.01	1.21	1.43	14.06	38.59
C	21.32	2.18	5.50	1.72	17.71	48.41
D	24.47	2.26	1.13	.47	17.13	46.47
E	28.45	1.17	3.11		19.43	52.16
AVERAGE	24.46	1.91	1.98	.83	18.21	47.38

TABLE 11

GENERAL STUDIES EXPENDITURE DETAIL IDENTIFYING COSTS PER STUDENT CREDIT HOUR BY INSTITUTION

Institution	Direct Salary	Indirect Salary	Supplies	Other	Institutional Expense	Total Operational Cost
A	16.49	1.23	.31	.33	24.78	43.14
B	31.87	.29	.07		14.06	46.28
C	10.69		.03	.02	17.71	28.46
D	23.63	1.62	.22	.14	17.13	42.74
E	24.38	.24	.09		19.43	44.14
AVERAGE	23.40	1.17	.20	.16	18.21	43.13

TABLE 12

ADULT & CONTINUING EXPENDITURE DETAIL IDENTIFYING COSTS PER STUDENT CREDIT HOUR BY INSTITUTION

Institution	Direct Salary	Indirect Salary	Supplies	Other	Institutional Expense	Total Operational Cost
A	9.20	1.13	3.44	4.59	24.78	43.14
B	11.76	1.35	.59	.88	14.06	28.64
C	20.99	.29	2.11	.08	17.71	41.19
D	8.94	1.23	.83	.22	17.13	28.35
E	63.81		4.64		19.43	87.87
AVERAGE	12.31	.97	1.44	.74	18.21	33.68

In the health area, for example, the following expenditures on a section basis were identified: Dental Assisting, \$163.33; Dental Hygiene, \$129.30; Associate Degree Nursing, \$48.57; Surgical Technician, \$287.61; and Physical Therapy Assistant, \$74.41. Other high expenditure areas were identified in the technologies while business offerings (Real Estate, \$10.16; Retail Trade, \$8.37; Accounting and Computing, \$6.34; Office Machines and Filing, \$12.99) were typically lower.

While a detailed analysis on a section basis for discipline or occupational codes is beyond the scope of this study, more specific data are reported in Appendix I. The data reported in the above tables can be summarized as follows: (1) the Occupational area generally had the highest cost per student credit hour based upon supplies and other departmental expenditures followed by the areas of Adult and Continuing Education, Baccalaureate, and General Studies; (2) a great deal of variation was found within each of the major areas and was associated with the general nature of instruction and content associated with specific disciplines; and (3) based upon accounting systems as currently used in the junior colleges and assignment techniques necessitated by these systems and used in this study, only approximately one-half of the expenditures were identified and directly assigned on a course basis. Uniform allocation of the remaining institutional operating expenditures were made on a student credit hour basis. The major limitation of the costs reported in this study is the lack of precision and uniformity in identifying expenditures to courses. Costs cannot be determined with any greater precision than the original data.

Enrollment and Cost as Affected by the Nature of Instruction

Expenditures and resources cannot be discussed in a meaningful manner unless they are related to some measure of the educational product. As previously presented, it is not any one measure that singly provides an indication of costs but more appropriately different measures which must be related to provide for analyses and interpretation. Tables 13 - 16 provide data describing the average enrollment per section, section costs, and student credit hour costs according to the nature of instruction used in each section. The student credit hour provides the most direct relation between cost and product. It is the designed enrollment of each section, primarily determined by the nature of instruction, that is the major determinant of minimum costs on a student and student credit hour basis as noted in the California and Western Cost and Statistical Study for 1954-55. Actual enrollment, below the designed level, may significantly increase costs for the above measures.

The data presented in tables 13 - 16 are the weighted average for each category. For example in Table 13, Institution A, to obtain the enrollment figure for lecture sections, the sum of all students enrolled in baccalaureate sections was divided by the sum of all sections indicating the average enrollment per section. Section costs were determined by dividing the total dollars assigned to the Baccalaureate area of instruction by the total number of baccalaureate sections while the student credit hour cost was determined by dividing the total operational baccalaureate expenditure by the sum of baccalaureate student credit hours. The same procedures were repeated for the remaining nature of instruction categories for each institution in tables 13 - 16.

TABLE 13

AVERAGE BACCALAUREATE ENROLLMENTS* AND TOTAL OPERATIONAL COSTS FOR EACH STUDENT CREDIT HOUR AND SECTION ACCORDING TO THE NATURE OF INSTRUCTION BY INSTITUTION

Institution		Lecture		Laboratory		Practicum		Discussion		Independent Study		Combined Lec/Lab		Separate Lec/Labs	
		En.	Cost	En.	Cost	En.	Cost	En.	Cost	En.	Cost	En.	Cost	En.	Cost
A	Section	31	3202.70	24	1038.72							26	3186.78		
	St. Cr. Hr.		38.88		53.71								46.45		
B	Section	23	2131.61	26	1488.45			23	442.92			21	2404.29	22	4329.42
	St. Cr. Hr.		31.30		51.93								32.70		44.38
C	Section	25	2420.19	17	831.89							20	3575.32		
	St. Cr. Hr.		31.96		47.05								43.86		
D	Section	20	2438.85	14	1491.74	2	285.36					13	2384.34	19	1479.60
	St. Cr. Hr.		34.26		70.44		58.12						48.53		33.53
E	Section	28	2526.58	36	1516.16							19	2743.75		
	St. Cr. Hr.		35.23		51.24								55.56		
AVERAGE	Section	25	2523.72	24	1240.95	2	285.36	23	442.92			20	2761.34	20	2189.59
	St. Cr. Hr.		34.45		52.08		58.12						41.98		38.12

*Average Enrollment Per Section

TABLE 14

AVERAGE OCCUPATIONAL ENROLLMENTS* AND TOTAL OPERATIONAL COSTS FOR EACH STUDENT CREDIT HOUR AND SECTION ACCORDING TO THE NATURE OF INSTRUCTION BY INSTITUTION

Institution		Lecture		Laboratory		Practicum		Discussion		Independent Study		Combined Lec/Lab		Separate Lec/Labs	
		En.	Cost	En.	Cost	En.	Cost	En.	Cost	En.	Cost	En.	Cost	En.	Cost
A	Section	22	2861.73	18	2993.70	16	3542.04	16	717.41			18	3304.12		
	St. Cr. Hr.		49.50		67.16		45.77		49.82				59.03		
B	Section	22	2196.56			17	8453.34			11	1237.49	17	1998.82	14	1507.94
	St. Cr. Hr.		33.83				49.72				37.49		38.84		51.27
C	Section	16	2045.44	11	3164.64	16	3206.42					14	2533.30		
	St. Cr. Hr.		43.79		80.45		40.08						50.32		
D	Section	22	2114.51	15	2052.64	9	2479.84					14	2502.23	15	1969.25
	St. Cr. Hr.		33.84		47.18		75.14						56.51		51.14
E	Section	24	561.37	9	4011.92	5	2867.53			13	3206.59	20	3143.26		
	St. Cr. Hr.		40.37		79.79		97.76				92.51		55.53		
AVERAGE	Section	22	2320.47	16	2996.43	12	3379.68	16	717.41	12	1729.76	17	2827.00	14	1809.47
	St. Cr. Hr.		37.50		66.65		56.59		49.82		51.76		54.62		51.18

*Average Enrollment Per Section

TABLE 15

AVERAGE GENERAL STUDIES ENROLLMENTS* AND TOTAL OPERATIONAL COSTS FOR EACH STUDENT CREDIT HOUR AND SECTION ACCORDING TO THE NATURE OF INSTRUCTION BY INSTITUTION

Institution		Lecture		Laboratory		Practicum		Discussion		Independent Study		Combined Lec/Lab		Separate Lec/Labs	
		En.	Cost	En.	Cost	En.	Cost	En.	Cost	En.	Cost	En.	Cost	En.	Cost
A	Section	27	2946.43	31	2577.49							7	1131.72		
	St. Cr. Hr.		40.22		63.27								60.64		
B	Section	17	1928.06												
	St. Cr. Hr.		46.28												
C	Section	24	2049.68												
	St. Cr. Hr.		28.46												
D	Section	18	2339.25	11	1047.03							11	1532.69		
	St. Cr. Hr.		39.27		99.35								66.39		
E	Section	19	2228.45												
	St. Cr. Hr.		44.14												
AVERAGE	Section	19	2341.69	19	1673.13							10	1516.66		
	St. Cr. Hr.		40.81		73.08								66.21		

*Average Enrollment Per Section

TABLE 16

AVERAGE ADULT & CONTINUING ENROLLMENTS* AND TOTAL OPERATIONAL COSTS FOR EACH STUDENT CREDIT HOUR AND SECTION ACCORDING TO THE NATURE OF INSTRUCTION BY INSTITUTION

Institution		Lecture		Laboratory		Practicum		Discussion		Independent Study		Combined Lec/Lab		Separate Lec/Labs	
		En.	Cost	En.	Cost	En.	Cost	En.	Cost	En.	Cost	En.	Cost	En.	Cost
A	Section	26	2734.68	29	2279.19							32	3584.08		
	St. Cr. Hr.		39.83		45.89								47.37		
B	Section	16	1078.17									20	1062.52		
	St. Cr. Hr.		28.77										26.56		
C	Section	17	1242.52	20	1692.76							16	1781.04		
	St. Cr. Hr.		41.98		28.21								37.10		
D	Section	20	1040.21			14	1467.83								
	St. Cr. Hr.		28.05				36.24								
E	Section									4	936.74				
	St. Cr. Hr.										87.87				
AVERAGE	Section	19	1169.64	26	2083.71	14	1467.83			4	936.74	25	2502.93		
	St. Cr. Hr.		32.85		39.23		36.24				87.87		41.83		

*Average Enrollment Per Section

The presentation of the data identified in these tables is limited to the averages for the major instructional areas of Baccalaureate, Occupational, General Studies, and Adult and Continuing Education. While selected institutional and section data are presented, further detailed information is on file with the Research and Development Unit of the State Division of Vocational and Technical Education. The limitations space prevented a detailed discipline or section presention and analysis in this study.

As indicated in Chapter III describing methodology six categories for the nature of instruction were originally established. One of these categories, that of lecture-laboratory, was further sub-divided for data analysis. This decision was made to accomodate (1) those lecture-laboratory courses consistently taught with one lecture section matched with one laboratory section (Combined Lec/Lab) and (2) those lecture-laboratory courses taught with one lecture session and several laboratory sections (Separate Lec-Lab).

The highest cost per student credit hour identified according to the nature of instruction was for an independent study section in Occupational Education. This section was a special Summer offering in the area of nursing and cost $92.51 per student credit hour. The second highest offering was also an independent study section but in the Adult and Continuing Education instructional area. It was a special day-time offering in horology costing $87.87.

In comparing the highest costs based upon institutional averages by nature of instruction, regardless of instructional area, the independent study category ranked highest ($87.87) followed respectively by the laboratory ($73.08), combined lecture-laboratory ($66.21), practicum ($56.59), separate lecture-laboratory ($51.18), discussion ($49.82), and lecture ($40.81) methods of instruction.

In comparing specific methods of instruction across the four major instructional areas, lecture costs were lowest per student credit hour and ranged from $40.81 to $32.85. Laboratory sections ranged from $73.08 in General Studies to $39.23 for Adult and Continuing Education offerings. Practicum costs per student credit hour ranged from $58.12 in the Baccalaureate instructional area to $36.24 in Adult and Continuing Education. The one institution generating student credit hours in the discussion method of instruction indicated a cost of $49.82. Independent study costs on an individual institution basis ranged from $37.49 to $92.51 per student credit hour. Combined lecture-laboratory sections ranged from $54.62 for Occupational offerings to $41.83 in the Adult and Continuing Education area. Separate lecture-laboratory sections ranged from $51.18 to $38.12 per student credit hour. All of the above figures were computed on a student credit hour basis, and except as noted in the case of independent study sections, are based upon the institutional averages for each of the four major areas of instruction.

Tables 13 - 16 show the average enrollment and the cost per section in addition to the cost per student credit hour. For example, it is possible to compare lecture sections in the Baccalaureate area which had an average enrollment of 25 students and a cost per section of $2,522.72 with the average lecture section in the Occupational area which had an enrollment of 22 students and cost $2,320.47. While the section costs in the Baccalaureate area were higher, the average enrollment in the

Occupational lecture sections was lower which resulted in a higher cost per student credit hour in the Occupational area. A comparison of section costs, average enrollment, and student credit hour costs between combined lecture-laboratory sections and separately taught lecture and laboratory sections indicated, for both the Baccalaureate and Occupational areas, that the costs per section and student credit hour were less for lecture-laboratory courses which were taught through the use of multiple laboratory sections.

From the presented data and discussions it may be concluded that the nature of instruction influenced the cost per student credit hour regardless of the major instructional area, and in all cases the lecture was the least costly method of instruction while the most costly was the independent study. Some of these differences are due to differences in actual enrollment and the procedures used to assign instructional load to sections. However, it appears that the nature of instruction must be appropriate to the learning activity. Resource allocation and particularly reimbursement formulas should be developed to account for identified differences in instructional method.

It should also be emphasized that costs are only one factor and often the least important in determining what types of offerings to provide. If a particular program or course is warranted, it should be offered and supported through the adequate provision of monies. On the other hand, significant savings may be achieved by changes in scheduling or combining courses or programs to gain a higher actual enrollment.

A Comparison of Total Costs and Enrollment

Earlier sections of this chapter have identified the effect of various expenditures upon measures of the educational product. These expenditures included direct salaries, indirect salaries, supplies, other departmental expenditures and those allocated on an institutional basis. The section immediately preceding described the effects of enrollment as determined by the nature of instruction used in a particular section.

It is the purpose of this section to show total operational costs, to relate the costs to the amount of credit and student credit hours generated on a section basis. Tables 17 - 20 respectively describe the Baccalaureate, Occupational, General Studies, and Adult and Continuing Education areas and have been compiled for this purpose. As previously indicated, it is the cost for various measures of the educational product as they relate to each other that provide for educational cost analysis.

All data presented in tables 17 - 20 have been caclulated on a weighted average basis. For example, the total operational dollars for Institution A in Table 17 were separately divided by the sum of Baccalaureate credit hours, contact hours, sections and student credit hours respectively providing credit hour, contact hour, section and student credit hour costs. The total number of baccalaureate students, credit hours, and student credit hours were then divided by the number of baccalaureate sections respectively providing the average enrollment per section, the average number of credit hours offered per section, and the average number of student credit hours per section. The same procedure was repeated for the remaining institutions in tables 17 - 20. The average provided for each table are again weighted averages.

The totals provided in Tables 17 and 18 are used to compare costs between the Baccalaureate and Occupational areas of instruction. The per section cost of $2299.07 in the Baccalaureate area was lower than the $2430.88 cost for the Occupational area. However, when these costs on a section basis were used to determine costs per credit hour, it was found the Baccalaureate cost of $792.54 was higher than the Occupational cost of $728.67. Also provided in the tables are the average number of credit hours per section: 2.90 for Baccalaureate instruction and 3.33 for Occupational instruction. This partly explains why the total section cost in the Baccalaureate area was lower than the Occupational section cost, while the credit hour cost was higher. The higher cost is also due to the higher number of contact hours assigned to Occupational sections and Baccalaureate sections. One should next compare the student credit hour costs of $37.12 in the Baccalaureate area and $47.38 in the Occupational area. The relationship of student credit hour costs for these two areas was a reversal of the credit hour costs and is explained by identifying the differing number of student credit hours generated per section. The average number of student credit hours per section in the Baccalaureate area was 61.92 while the Occupational area generated 51.29 student credit hours per section. This example has been provided to identify the costs which must be obtained for various measures of the educational product and the possible cost reversals which are dependent upon the selected unit.

An overall analysis as to the credit hours generated per section indicated the Occupational area to be highest (3.33) followed by General Studies (3.06), Baccalaureate (2.90), and Adult and Continuing Education (1.91). An analysis of the student credit hours generated per section, again based upon the totals for each major area of instruction, indicated

TABLE 17

AVERAGE BACCALAUREATE COSTS FOR CREDIT HOURS, CONTACT HOURS, SECTION, AND STUDENT CREDIT HOUR BASED UPON TOTAL OPERATING EXPENDITURES, AND AVERAGE CREDIT HOURS AND STUDENT CREDIT HOURS PER SECTION AND ENROLLMENT PER SECTION

Institution	Credit Hour Cost	Contact Hour Cost	Section Cost	Average Enrollment Per Section	Student Credit Hour Cost	Credit Hours per Section	Student Credit Hours per Section
A	829.40	730.67	2730.56	28.89	41.02	3.29	66.51
B	784.41	638.78	2037.74	22.56	35.13	2.59	57.99
C	815.85	781.69	2494.36	23.49	34.52	3.05	72.25
D	849.30	692.84	2145.03	18.73	36.73	2.52	58.39
E	680.16	589.39	2409.53	27.79	38.64	3.54	62.35
AVERAGE	792.54	676.03	2299.07	23.46	37.12	2.90	61.92

TABLE 18

AVERAGE OCCUPATIONAL COSTS FOR CREDIT HOURS, CONTACT HOURS, SECTION, AND STUDENT CREDIT HOURS BASED UPON TOTAL OPERATING EXPENDITURES AND AVERAGE CREDIT HOURS AND STUDENT CREDIT HOURS PER SECTION AND ENROLLMENT PER SECTION

Institution	Credit Hour Cost	Contact Hour Cost	Section Cost	Average Enrollment Per Section	Student Credit Hour Cost	Credit Hours per Section	Student Credit Hours per Section
A	677.79	495.03	3051.26	19.69	54.98	4.50	55.49
B	734.67	644.02	1970.16	18.03	38.59	2.78	51.05
C	704.45	588.53	2358.39	14.39	48.41	3.34	48.71
D	797.66	513.38	2182.88	16.27	46.47	2.73	46.96
E	678.57	417.55	3023.93	20.33	52.16	4.45	57.96
AVERAGE	728.67	502.26	2430.88	17.85	47.38	3.33	51.29

TABLE 19

AVERAGE GENERAL STUDIES COSTS FOR CREDIT HOURS, CONTACT HOURS, SECTION, AND STUDENT CREDIT HOURS BASED UPON TOTAL OPERATING EXPENDITURES AND AVERAGE CREDIT HOURS AND STUDENT CREDIT HOURS PER SECTION AND ENROLLMENT PER SECTION

Institution	Credit Hour Cost	Contact Hour Cost	Section Cost	Average Enrollment Per Section	Student Credit Hour Cost	Credit Hours per Section	Student Credit Hours per Section
A	788.82	703.69	2834.80	27.63	43.14	3.59	56.70
B	794.47	632.40	1928.06	16.90	46.28	2.42	41.65
C	683.22	683.22	2049.68	20.00	28.46	3.00	72.00
D	723.89	652.98	2077.25	15.71	42.74	2.86	48.60
E	557.20	557.20	2228.45	18.93	44.14	4.00	50.48
AVERAGE	720.44	648.10	2205.26	18.52	43.13	3.06	51.11

TABLE 20

AVERAGE ADULT & CONTINUING COSTS FOR CREDIT HOURS, CONTACT HOURS, SECTION, AND STUDENT CREDIT HOURS BASED UPON TOTAL OPERATING EXPENDITURES, AND AVERAGE CREDIT HOURS AND STUDENT CREDIT HOURS PER SECTION AND ENROLLMENT PER SECTION

Institution	Credit Hour Cost	Contact Hour Cost	Section Cost	Average Enrollment Per Section	Student Credit Hour Cost	Credit Hours per Section	Student Credit Hours per Section
A	790.83	485.75	2833.16	28.12	43.14	3.58	65.66
B	484.78	421.55	1077.30	16.66	28.64	2.22	37.61
C	687.16	491.13	1265.00	16.63	41.19	1.84	30.70
D	602.28	507.55	1005.35	18.84	28.35	1.66	35.46
E	352.15	352.15	936.74	4.00	87.87	2.66	10.66
AVERAGE	628.79	486.07	1205.89	23.42	33.68	1.91	35.80

the Baccalaureate area to be highest (61.92) followed by the Occupational (51.29), General Studies (51.11) and Adult and Continuing Education (35.30) areas.

A strong influence on changes across section, credit hour, and student credit hour costs is discerned by taking into account the average enrollment per section in each of the instructional areas. Tables 17 - 20 indicate the average enrollment per section in the Baccalaureate area to be highest (23.46) followed closely by Adult and Continuing Education (23.42), General Studies (18.52), and Occupational (17.85) offerings. It is well to note at this time that the lowest cost for any unit of the educational product was identified in the Adult and Continuing Education area which was a close second in average enrollment. The Baccalaureate area was identified as having the next lowest cost per student credit hour and had the highest average enrollment. The General Studies area with an average enrollment of 18.52 was also less costly per student credit hour than the Occupational area which had an average enrollment of 17.85.

On a section basis, Occupational offerings were more costly than Baccalaureate offerings; on a credit hour basis, Baccalaureate offerings were more costly than Occupational offerings. On a student credit hour basis, however, Baccalaureate offerings became less costly than the Occupational offerings.

One other measure of the educational product, the contact hour, is also provided in tables 17 - 20. As previously presented, the contact hour represents the total amount of instructional time necessary for the offering of a course and is, therefore, considered a direct measure of the educational product. However, it only indicates classroom time spent for instruction and does not provide a measure of the time necessary for preparation or student evaluation on the part of the teacher or the number of students served. The credit hour is equally deficient in reflecting the same factors.

In the case of Institutions B and C in Table 18, the section cost for Institution B was far lower than that for Institution C, while the credit hour cost at Institution B was somewhat higher than that at Institution C. The student credit hour cost at Institution B at $38.59 was again less than that at Institution C at $48.41. Costs, therefore, should only be interpreted by individuals understanding their relative values, and should be viewed as a combination of section, credit hour, and student credit hour costs.

Table 21 presents selected data obtained from Appendices I, J and K. These data are presented here to illustrate the relationships of discipline and occupational codes within the major instructional areas (Occupational and Baccalaureate).

In analyzing the data presented in tables 17 - 20, one must use a combination of section, credit hour, and student credit hour cost units, for it is only through a thorough analysis of the interrelationship of all three, that an interpretation as to the costs of various offerings should be made.

There are several major sources of influence in the determination of the cost of the educational product. Instruction actually takes place in a section. At this point at this level costs are incurred and enrollment is determined. It is also the basic module for determining the nature

TABLE 21

SELECTED DISCIPLINE AND OCCUPATIONAL CODE COSTS FOR CREDIT HOURS, CONTACT HOURS, SECTION, AND STUDENT CREDIT HOURS BASED UPON TOTAL OPERATING EXPENDITURES, AND AVERAGE CREDIT HOURS AND STUDENT CREDIT HOURS PER SECTION AND ENROLLMENT PER SECTION

Baccalaureate	Credit Hour Cost	Contact Hour Cost	Section Cost	Average Enrollment Per Section	Student Credit Hour Cost	Credit Hours Per Section	Student Credit Hours Per Section
English	762.68	761.17	2189.19	21.67	35.07	2.87	62.42
Biology	993.77	720.70	2062.31	14.32	40.02	2.07	51.52
Music	765.33	557.42	1465.03	14.53	45.89	1.91	31.92
Social Science	783.40	770.76	2268.81	24.52	31.09	2.90	72.96
Occupational							
Agricultural Mechanics	566.91	366.20	1734.07	5.82	101.65	3.05	17.05
Real Estate	668.70	600.26	1733.42	19.55	30.35	2.59	57.11
Dental Hygiene	878.94	426.98	2130.22	12.79	71.06	2.42	29.97
Welding and Cutting	516.64	249.12	1434.55	9.67	55.33	2.78	25.92

of instruction and the relative amount of a faculty members energies that will be required. The amount of credit to be awarded and the number of contact hours to be utilized are based on professional judgment. Decisions concerning whether or not a course or section is to be offered, how often it should be offered and the faculty assignment to the section involve consideration of the institutional role, community needs and requirements of established programs; student demand for a section is the primary determinant of the actual enrollment in a section.

The largest single factor determining the cost per section or credit hour is the amount of faculty salary charged to the section, and it is relatively independent of actual enrollment. Assignment of salary to a section is typically accomplished on credit hour or contact hour bases; the actual hour was used in this study. Neither of these bases is adequate to reflect the actual staff energies required for teaching a section. A section with a large contact hour schedule will necessarily have a higher cost per section and credit hour when a contact hour method of faculty salary assignment is used. Also since each section has a maximum enrollment, the minimum cost per student credit hour is essentially established, except for possible increased costs of supplies, etc. Actual student credit hour cost is dependent upon the enrollment in the section.

Costs for a section, credit hour and contact hour are actually the costs of offering an educational program which are relatively independent of the number of students served. The student credit hour is the only measure reflecting all variables.

In the preceding example of Institutions B and C, the higher section costs at C could have been due to one or more of the following: higher instruction salaries at C, a higher percentage of the instructors salary charged to each section, or possibly due to a higher rate of contact hours to credit hours at C. In fact, C used an average of four contact hours per section and B used three hours while C gave more credit per section and per contact hour than B. The student credit hour costs are lower at C in spite of a lower average enrollment. In general, a direct relationship is to be expected between enrollment and cost per student credit hour since relatively fixed costs are being apportioned over more students. However, tables 17 - 20 do not reflect this type of relationship, thus, indicating other sources of influence. More detailed analyses are necessary to determine sources and amounts of influence. The data to be included in the proposed system would make such analyses possible. The assignment of instructor salary to a section as a percentage of the full-time salary would provide the local institution the flexibility to take into account all factors related to teaching a section and provide a direct and meaningful salary cost per section.

Operational Costs Compared with Selected Resources

The calculation of costs for various measures of the educational product was necessary in this study for estimation of resource needs. The study was funded to determine the cost of Occupational programs as compared to more traditional offerings of an academic nature and to identify the relative adequacy of vocational reimbursement monies in meeting the costs of the offerings. While operational costs, junior college reapportionment, and tuition data were initially prepared on a section basis, the lack of section data from records maintained by the Division of Vocational and Technical Education prevented the identification of vocational reimbursement monies on a section basis. They were maintained on a course basis; therefore, vocational reimbursement, tuition, and junior college reapportionment monies were subtracted from the total operational costs on a course basis as identified in this study resulting in what is termed the cost to the local district. The costs reflected in this study are based on operational expenditures and do not, therefore, reflect the total expenditures of any institution during fiscal year 1969-70. In addition, other revenue sources such as tuition charge backs, laboratory fees, and specific federal and state monies other than vocational education reimbursement were not subtracted from section or course costs due to the lack of available data. Any interpretations of the cost to the local district should therefore be made in light of the above limitations.

In addition, projected costs and levels of reimbursement were also computed. These projections were based on the maximum enrollment which could be accomodated in a given section as identified by each of the participating institutions. Since expenditures within the designed interval of enrollment were relatively stable, costs as computed on the basis of mid-term enrollment were also used for the projections. The amount of money received for tuition and the reapportionment monies received from the Junior College Board on a student credit hour basis were used to determine the maximum revenue on the basis of maximum enrollment of each section. The amount of vocational reimbursement monies available for distribution to local institutions has remained relatively unchanged and has, therefore, not been calculated on a per student at maximum enrollment basis in the projected data. The projection procedures described resulted in a lower operational cost per student credit hour and an increased amount of total revenue based on tuition and junior college reapportionment monies.

Tables 22 - 25 identify on a student credit hour basis the three sources of revenue, actual cost based on mid-term enrollment, local district cost based on mid-term enrollment, projected cost based on maximum enrollment, and a projected local district cost based on maximum enrollment. Again, it is important to note that the actual and projected data are historical in nature and are not intended to reflect fiscal data of the current year nor should they be interpreted as reflecting a lack of institutional efficiency. Additional information is provided in Appendix J which presents data on a discipline and occupational code basis.

Tables 22 - 25 were prepared to compare rates of selected resource per student credit hour with actual and projected local and total costs based upon operating expenditures. As in all tables and appendices, calculations are based on the semester hour. Column one, Junior College Reapportionment, indicates the standard rate of reapportionment per semester hour (15.50) provided by the Junior College Board. Column two indicates the rate of reimbursement provided by the Division of Vocational and Technical Education. Emphasis is placed on the rate of reimbursement per semester hour, since not all courses are reimbursed. For example if the total amount of Baccalaureate student credit hours were divided into the amount of monies received for the Baccalaureate instructional area, the dollar amount would not equal the rate indicated in these tables. Therefore a weighted average was not used in computing vocational reimbursement per student credit hour but the rate of reimbursement is indicated. The rate of tuition charged per student credit hour is also indicated from data provided by each college. Averages provided for rates of reimbursement are simple averages.

Actual and projected costs based on total expenditures and expenditures to the local district are weighted averages. For example total actual costs for each institution in Table 22 were obtained by dividing Baccalaureate expenditures by Baccalaureate student credit hours generated at mid-term. Local district mid-term costs were obtained by subtracting from the expenditures the amount of monies received from the Junior College Board, the Division of Vocational and Technical Education, and tuition for Baccalaureate sections. The remainder was divided by the number of student credit hours in the Baccalaureate area generated at mid-term to obtain the local district cost per student credit hour.

Total costs obtained from the maximum projected enrollment were obtained for a particular institution in Table 22 by dividing total operational expenditures by the amount of student credit hours generated from the projected maximum enrollment. Local district costs based on the projected maximum enrollment were obtained by subtracting from the total operational costs: (1) the projected amount of Junior College Board Reapportionment monies (i.e. projected student credit hours times 15.50), the projected amount of tuition (i.e. projected amount of student credit hours times the tuition rate of the college) and (3) the amount of reimbursement provided by the Division of Vocational and Technical Education. Since the amount of money available from the Division of Vocational and Technical Education has remained stable, projections of the revenue source were not made. By subtracting the revene sources as described above from total expenditures, a local district cost was obtained. This local district cost was then divided by the projected amount of student credit hours (obtained from the maximum enrollment on a section basis) to obtain the local district cost per student credit hour.

With the exception of General Studies, vocational reimbursement monies were identified on a course basis in each of the four major instructional areas. As indicated in Chapter III, Procedures and Methods, some of the sections contained both Baccalaureate and Occupational students. Since vocational reimbursement was provided for the Occupational students in a section classified as Baccalaureate, vocational reimbursement monies from the Division of Vocational and Technical Education are shown in this report in the Baccalaureate tables. It should be emphasized that the monies so noted are for Occupational students and not for Baccalaureate students enrolled in the same section. Vocational monies were also provided for adult students and appear in the Adult and Continuing Education tables.

In assigning the monies received from the Division of Vocational and Technical Education on a student credit hour base, vocational claim forms were matched against alphabetical listings of the courses offered by each college. Course numbers were matched for every term and the number of students in each course on the vocational claim forms were then indicated on the college listing and transferred to punched cards. The number of student credit hours in each course was then multiplied by the rate of reimbursement assigned to the institution by the Division of Vocational and Technical Education.

TABLE 22

ACTUAL AND PROJECTED OPERATIONAL COSTS* AND REVENUE SOURCES FOR BACCALAUREATE OFFERINGS BY INSTITUTION

Institution	Junior College Reapportionment	State Division of Vocational Education Reimbursement	Tuition	Actual Cost	Local District Mid-Term Costs	Projected Cost	Projected Local District Maximum Costs
A	15.50	13.50	4.88	41.02	19.67	29.68	8.67
B	15.50	10.50	7.00	35.13	12.49	26.89	4.28
C	15.50	12.75	3.00	34.52	15.77	25.92	7.23
D	15.50	9.75	5.00	36.73	16.22	27.77	7.27
E	15.50	8.25	8.25	38.64	14.59	25.31	1.36
AVERAGE	15.50	10.95	5.62	37.12	15.60	27.21	5.73

*Costs Per Student Credit Hour

TABLE 23

ACTUAL AND PROJECTED OPERATIONAL COSTS* AND REVENUE SOURCES FOR OCCUPATIONAL OFFERINGS BY INSTITUTION

Institution	Junior College Reapportionment	State Division of Vocational Education Reimbursement	Tuition	Actual Cost	Local District Mid-Term Costs	Projected Cost	Projected Local District Maximum Costs
A	15.50	13.50	4.88	54.98	23.61	32.33	5.85
B	15.50	10.50	7.00	38.59	11.40	19.86	.84
C	15.50	12.75	3.00	48.41	20.55	26.65	3.04
D	15.50	9.75	5.00	46.47	19.22	30.71	5.98
E	15.50	8.25	8.25	52.16	22.93	30.19	3.37
AVERAGE	15.50	10.95	5.62	47.38	19.06	29.82	4.16

*Costs Per Student Credit Hour

TABLE 24

ACTUAL AND PROJECTED OPERATIONAL COSTS * AND REVENUE SOURCES FOR GENERAL STUDIES OFFERINGS BY INSTITUTION

Institution	Junior College Reapportionment	State Division of Vocational Education Reimbursement	Tuition	Actual Cost	Local District Mid-Costs	Projected Cost	Projected Local District Maximum Costs
A	15.50		4.88	43.14	22.66	27.20	6.83
B	15.50		7.00	46.28	23.78	36.53	14.03
C	15.50		3.00	28.46	9.97	24.40	5.90
D	15.50		5.00	42.74	22.24	30.95	10.45
E	15.50		8.25	44.14	20.39	24.63	.88
AVERAGE	15.50		5.62	43.13	22.06	29.64	8.52

*Costs Per Student Credit Hour

TABLE 25

ACTUAL AND PROJECTED OPERATIONAL COSTS* AND REVENUE SOURCES FOR ADULT & CONTINUING OFFERINGS BY INSTITUTION

Institution	Junior College Reapportionment	State Division of Vocational Education Reimbursement	Tuition	Actual Cost	Local District Mid-Term Costs	Projected Cost	Projected Local District Maximum Costs
A	15.50	13.50	4.88	43.14	20.37	22.76	8.40
B	15.50	10.50	7.00	26.64	-1.81	16.83	-10.34
C	15.50	12.75	3.00	41.19	21.76	30.47	11.27
D	15.50	9.75	5.00	28.35	7.63	24.57	3.88
E	15.50	8.25	8.25	87.87	54.09	23.40	-2.53
AVERAGE	15.50	.22	5.62	33.68	11.71	24.57	4.08

*Costs Per Student Credit Hour

Data collected on an individual student basis would have allowed for precise identification of occupational and transfer students and even the assignment of two separate codes if necessary to such courses. For example, that portion of the course containing Baccalaureate students would have been assigned an Illinois Junior College Discipline Code, while the students for Occupational purposes in the course would have been assigned a U.S.O.E. Occupational Coding System number.

A comparison of actual costs per student credit hour in the Baccalaureate and Occupational areas indicated a difference of slightly over ten dollars. However, in applying consistent rates for junior college reapportionment and tuition, the effect of vocational reimbursement monies can be discerned in that the average net difference in local district costs for these two major areas of instruction amounts to $3.46 (19.06 - 15.60). A comparison based on actual operational costs of the Occupational and General Studies areas indicated the Occupational area to be $4.28 more costly. The lack of vocational reimbursement monies for the General Studies area, however, resulted in a higher local district cost for the General Studies area of approximately three dollars. While monies were also received for offerings in the Adult and Continuing Education area from the Division of Vocational Education, the rate of reimbursement was on a different basis and the effect of vocational monies on the cost for these offerings cannot be directly compared with the other three major instructional areas.

On an institutional basis, a comparison of actual and net local district costs based on mid-term enrollment for Institution B indicated that monies received from the Division of Vocational and Technical Education made Occupational offerings less expensive on a student credit hour basis than Baccalaureate offerings. Extremes on a discipline or occupational code basis were also identified, see Appendicies I, J, and K.

On a projected basis both the total operational cost and costs to the local district were, of course, lower than those calculated on the basis of mid-term enrollment. While the Occupational offerings based on all operational expenditures per student credit hour had the highest total cost, they were closely followed by General Studies ($29.64), Baccalaureate ($27.21), and Adult and Continuing Education ($24.57) offerings. On the basis of 1969-70 fiscal and enrollment data, therefore, a maximum difference in total cost between the most expensive average and least expensive average offering amounted to $5.25 per student credit hour if all sections were filled to maximum enrollment capacities. It is, however, highly unlikely that all sections would be filled to maximum enrollment during any term. It should also be noted that the projections in no way account for building and room utilization, but deal only with the same number of sections as offered during fiscal year 1969-70.

Local district costs projected on a maximum enrollment basis indicated General Studies offerings to be most expensive ($8.52) followed by Baccalaureate offerings ($5.73), Occupational offerings ($4.16), and Adult and Continuing Education offerings ($4.08). Given the same fiscal 1969-70 institutional environment, the same combination of resources as were available that year, and all sections filled to capacity, the cost of offering Occupational programs on a student credit hour basis would have been less than that of the Baccalaureate and General Studies areas.

While it is unlikely that maximum enrollment can be attained, these illustrations serve to indicate the effect of enrollment on total operational costs, reimbursement, and local district costs on a student credit hour basis.

Summary

This chapter has presented costs for various measures of the educational product and illustrated the various rankings in terms of cost among the four major instructional areas when different measures were considered. It identified the relatively minor role of supplemental expenditures in affecting student credit hour costs while indicating the greatest single influence on the student credit hour cost to be the maximum enrollment in a given section as determined by the nature of instruction and the actual enrollment when the section was offered. Tables 13 - 16 are most useful in identifying average enrollment, section, and student credit hour costs according to the nature of instruction for the four major instructional areas. The effect of enrollment was, again, identified in tables 17 - 20 as were the costs for various measures of the educational product. A comparison of operational costs and revenues based on midterm and projected enrollments was provided in tables 22 - 25.

Resources as currently provided by the Junior College Board and the State Division of Vocational and Technical Education, particularly the latter, serve to equalize the costs of the four major instructional areas to the local district. While the total operational costs for Occupational offerings were the highest on a student credit hour basis of the four major instructional areas, reimbursement monies as provided by the State Division of Vocational and Technical Education tended to lessen their

their cost when based on mid-term enrollment and when based on projected costs and revenue at maximum enrollment, rendered Occupational offerings slightly less costly for each student credit hour than either General Studies or Baccalaureate offerings.

Tables 13 - 25 are summaries of more refined data shown in Appendices I and J and provide for gross average comparisons in the four major instructional areas. Differences within each of these four areas on a department or discipline basis are greater than the differences between the averages of the four areas. In addition, large differences were found in enrollment and costs for courses and sections within disciplines and departments at the same institution and across institutions. Copies of the latter data are not included in this report due to space requirements but have been deposited with the Division of Vocational and Technical Education.

The summary tables present data that is useful for gross comparisons. However, selected analyses of the data at a more refined level would most often be utilized in planning and decision making. Data obtained from the sources and at the level of refinement suggested could be utilized for the appropriate analysis at the desired level of refinement. Such analyses are not possible with the present procedures for data classification and recording.

CHAPTER V

A SYSTEMS MODEL FOR A COORDINATED EDUCATIONAL DATA PROCESSING SYSTEM

One of the primary objectives of this study was the formulation of recommendations which could be used in the implementation of a coordinated educational data processing system. As previously presented, the system would allow for the identification of educational resources to the purposes for which they were intended, and in addition, provide data describing the variables affecting section and student credit hour costs. It is only through prior coordination, specification of data requirements, planning, provision of sufficient lead time, and a total systems approach that resources, students served, and costs can be accurately related.

This chapter is divided into three main sections. The first section presents a conceptual model relating data sources, procedures, and desired outputs necessary for the purposes of resource allocation and accountability. The second section describes basic data sources and procedures necessary to support an automated system. The third section describes an automated system based upon the systems model and the identified data sources.

The Systems Model

Most simply stated, the systems model relates identified resources to expenditures and measures of the educational product. The procedures necessary to provide such relationships, however, quickly become increasingly complex when the various sources of revenue, the many measures of the educational product for which costs are computed, the varying types of expenditures and the ledgers in which they are recorded are considered. While the determination of resource accountability and allocation should be on the basis of actual learning experiences achieved by idividual students, techniques for such measurement are in need of further development. The model as described here will be limited to conventional methods of measurement, resource and expenditure identification, and cost determination. It should be noted that even such conventional methods are in need of many changes to provide for the refinement necessary to the accurate determination of the resource-product relationship.

Conceptually, the model may be described in three separate but interrelated phases as shown in the following illustration:

ILLUSTRATION 2

I
Data Sources
(input)

1. Student
2. Faculty
3. Expenditures
    a. operational
    b. capital
4. Revenue

II
Processing
(computer assisted)

1. Classifications for Aggregation and Comparisons
2. Identification of Students Served by Characteristic
3. Assignment of Expenditures
    a. direct salary
    b. indirect salary
    c. operational support expenditures
    d. capital expenditures
4. Determination of Costs on a Section Basis
    a. salary costs

III
Desired Reports
(output)

1. Institutional (local)
    a. faculty load and salary costs
    b. discipline or area of instruction salary costs
    c. discipline or area of instruction operational expenditures
    d. discipline or area of instruction costs based on all expenditures
    e. tabulations as to the students served
    f. determination of resources and expenditures on a student basis

ILLUSTRATION 2
(cont.)

I Data Sources (input)	II Processing (computer assisted)	III Desired Reports (output)
	b. operational costs c. capital costs	g. determination of product generated
	5. Assignment of costs to various measures of the educational product	2. Inter-Institutional (local and state as above)
	a. student b. credit hour c. student credit hour	3. Compilation of State Data for Federal Reports
	6. Assignment of Revenue to Measures of the Educational Product	
	7. Aggregation, Comparison and Analysis Techniques	

The above identified components (input, processing, output) typify any computer-assisted system. The data sources and suggested processing procedures have been chosen in view of current needs for student identification and basic cost information, both of which allow for the determination of the resource-service relationship. Two important features of the model should be emphasized: (1) the data sources are at the most basic level and contain data in all necessary classifications, and (2) the computation of costs necessary to the resource-service relationship provides the basic elements necessary for educational cost analysis. The advantages of basic data sources are (1) accuracy, (2) savings in time and, consequently, in resources necessary to provide such data, and (3) flexibility in providing for combinations of data as they become necessary. The basic cost data necessary for the determination of the resource-service relationship identifies not only cost but activity, activity rates, and the variables affecting costs. As such, this basic cost data may be used as the first step in cost analysis studies, cost-effectiveness studies, and cost-benefit studies, all of which rely on an empirical data base.

It is difficult to discuss the resource-service relationship without discussing the computation of costs. Accurately computed cost data collected over a number of years will allow for decision-making and planning thus facilitating changes in the resource-service relationship. The model as developed, therefore, relies on and provides for information inputs necessary to a determination of the resource-service relationship and educational cost analysis.

In the development of any system, consideration must first be given to the desired end products (output). The types of reports, in addition to the types of comparisons and analyses which will be required, dictate data sources. It is only then that processing techniques may be developed to utilize the identified source data to provide the desired reports. Care must be taken to provide for the efficient collection of required data and avoid the duplication of efforts and the collection of data which will not be used. Conversely, data sources should be chosen and classification established which allow for flexibility at a later date should additional data from any given source be desired. While the data flow and the systems design structure the development of a system, in a step-wise fashion, consideration should also be given to the inter-relationships and restrictions of input, processing, and output upon one another.

One of the major problems in the systems design is the lack of adequate data bases. Studies such as this one, for example, while providing meaningful data at a gross level, lack the refinement and accuracy which could be attained if an adequate coordinated data base could be established.

The following example pertinent to the results of this study illustrates the necessity of implementing the recommendations contained herein. Student data used in this study were acquired on an aggregated basis. Data were not available on an individual student basis indicating the section or sections in which he was enrolled. Instead, section data, as provided by each institution, identified the number of students in each section but gave no student characteristics. While such data were sufficient for basic cost computations and the gross identification of reimbursement on a course basis, they were not adequate for purposes of resource-service identification. The actual procedures used in this study required the summation of the various sections making up an idividual course offering to determine costs incurred and students served. It was to such course totals that the reimbursement supplied by the Division of Vocational and Technical Education and the Junior College Board, and tuition were related. This procedure not only prevented the identification of vocational reimbursement on a section basis but totally ignored the identification of students served including those with particular characteristics normally afforded additional reimbursement monies, such as the handicapped and disadvantaged. The use of such data did not allow for the analyses desired for this study, and in addition, required tedious manual procedures of identification which invited human error and lessened the accuracy of results.

The accuracy and validity of the results could have been greatly increased if data had been collected on an individual student basis. An individual record for each student in each course in which he enrolled would have identified: (1) the student, (2) the course and section of enrollment, (3) the specific program in which the student was enrolled, (4) a classification identifying the course as Transfer or Occupational, and (5) necessary student characteristics such as whether the student was disadvantaged, handicapped, etc. Such data were not available on an individual student record basis and were, therefore, not utilized in this study.

Two basic premises underlie the development of this systems model:

1. All data should be acquired in its most basic form and be coded with all variables which may be assigned to it.
2. Reports should be generated in successive levels of summation as necessary for different purposes and administrative levels and agencies.

These premises lend themselves to a parallel pyramid approach, one descirbing increasingly aggregated reports and the other describing their use by administrative levels and agencies in an established hierarchy.

ILLUSTRATION 3

Aggregated

Report Format	Administrative Levels
Inter-Institutional	State Agencies
Institutional Reports	Chief Institutional Administrator
Divisional Reports and Department Reports	Deans and/or Division Chairmen
Detailed Reports on a Course Basis	Departmental and/or Program Administrators
Detailed Reports on a Section Basis	

Refined

The above pyramids are suggestive of the types of reports and the person(s) or agencies to which they may be of most value. It is readily conceivable that department chairmen would be interested in inter-institutional comparisons and analyses. Conversely, state agency administrators typically concerned with summarized reports might well be interested in support data generated in detailed reports since they must make decisions concerning funds for these programs. Again, if the system builds upon basic data sources, a high degree of accuracy may be attained at any level. Reports based upon detailed information may be generated, summarized, and compared as deemed necessary.

Desired Comparisons and Analyses

It is the purpose of this section to identify desired comparisons and analyses. The suggested data, classifications, and possible reports are comprehensive but should not be considered as limits of the system. Should new analyses be desired, variables may be added within basic source documents.

Identification of the Students Served

The collection of data on an individual student record basis is essential to the success of the system as well as indispensable in relating funds to the purposes for which they were intended. The following tabulations on an individual student basis are suggested: (1) the total enrollment in the curriculum or institution (unduplicated head count), (2) the number of part-time and full-time students in a curriculum or in the institution, (3) the number of students and amount and type of credit generated by day or evening courses and the amount of credit being taken by each student, (4) the number of male and female students in a curriculum or in attendance at the institution and type of courses and program followed by each, (5) the number of disadvantaged or handicapped students in a given curriculum, the amount of credit for which they are enrolled and the total number of such students in attendance at the institution, (6) tabulation by race and other individual characteristics as to the number of students enrolled in the institution or in a given curricula, (7) corss subtotals by any combination of categories.

In addition, the courses taken by students in each curricula may be identified. This is particularly important in Occupational programs since many of the students: (1) take courses other than those prescribed in the college catalog and (2) take, on a part-time basis, only those courses which appear necessary for their vocational aspiration. The identification of students also allows the computation of costs for all services rendered to the student and, therefore, a comparison of costs to revenue allocated for specific services.

Measures of Faculty Load

Measures of faculty load are essential to the assignment of salaries to direct and indirect teaching responsibilities, to determine the number of full-time equivalent faculty members devoted to a particular educational service, and to allow for comparisons within and among institutions as to the number of full-time equivalent faculty members responsible for producing amounts of credit hours and student credit hours of various kinds. The following measures should therefore be included in the resource for each faculty member on a quarter or semester basis:

1. Number of credit hours taught per section
2. Number of contact hours taught per section
3. Number of sections taught and the percentage of load assigned to each section
4. Other assignments and the percentage of load assigned to them
5. Number of students taught per section and the total number of students taught

Such data could them be totaled to provide the total load for each faculty member by quarter and year, in addition to the comparisons and analyses suggested above. In addition to tabulations of the above categories, data could be aggregated to reflect totals and averages for each of the categories by: (1) quarter or semester, and year, (2) instructional area (department, discipline code, or U.S.O.E. code), and (3) major program (Occupational, General Studies, etc. Inter- and intra-institutional comparisons could also be provided indicating the percentage of load assigned to each activity or course and for each credit and/or contact hour by type of appointment.

Measures of Unit Cost

A unit cost is a measure of expenditures for some unit of the educational product such as a credit hour, contact hour, student credit hour or student. As such, measures of unit costs are essential in relating resources to the purposes for which they were intended and for cost analyses. Unit costs are the common denominator to which expenditures may be assigned, costs computed and then related to the resources provided by a specific source. Unit costs are also necessary as the first step in providing basic data for studies concerned with cost-effectiveness and cost-benefit.

It is impossible to discuss expenditures without relating them to a measure of the educational product or unit costs. (A discussion relating resources to services and units of measurement has been provided in Chapter I, The Resource-Service Relationship and Units of Measurement.)

Once unit costs have been computed, particularly those on a student basis, it is then possible to utilize the individual student data in the computation of costs and relate them directly to resources received. For example, it would be possible to determine the unit costs and then total these costs for each of the disadvantaged students enrolled at the institution. All costs for each category of student or type of service could then be compared with the amount of revenue received for that purpose thus providing a presently unavailable level of accountability. The following measures of unit cost are suggested:

1. Direct instructional salary for each section, each credit hour, each contact hour, each student credit hour, each student contact hour, each FTE student based upon a specified time of enrollment.

2. Indirect instructional salaries (administration, counseling, curriculum development, and other) for each section, each credit hour, each contact hour, each student credit hour, each student contact hour, each FTE student based upon a specified time of enrollment.

3. Departmental supplementary expenditures (travel, contractual, supplies, equipment, rentals, other) for each section, each credit hour, each contact hour, each student credit hour, each student contact hour, each FTE student based upon a specified time of enrollment.

4. Institutional expenditures for each section, each credit hour, each contact hour, each student credit hour, each student contact hour, each FTE student based upon a specified time of enrollment.

5. Total costs (the sum of the above idenfied expenditures) for each section, each credit hour, each contact hour, each student credit hour, each student contact hour, each FTE student based upon a specified time of enrollment.

Each of the above expenditures and the total cost should be computed to provide total and average costs for each course, instructional area (discipline code, department, or U.S.O.E. code), program (Occupational, General Studies, etc.), institution, or all institutions from which data are collected.

Additional tabulations should also describe total and average costs for categories established according to the nature of instruction (laboratory, lecture, laboratory-lecture, independent study, practicum, discussion, etc.), level of offering (freshman, sophomore, Adult and Continuing, General Studies or developmental), and time of offering. Total tabulations according to these categories should be supplemented with tabulations within each instructional area and program. Based on consistent enrollment data reimbursement may also be calculated on a section basis allowing for the computation of costs to the local district where revenue is received from multiple sources.

Measure of Section Size

Student enrollment, credit hours, student credit hours, contact hours, and student contact hours will be recorded for each section. Such data could then be aggregated to provide total, average, maximum, and minimum enrollment figures (based upon mid-term or other enrollment time) for each course, instructional area, and program. Similar computations based upon maximum enrollment figures should also be provided.

Data Sources

The following sections describe basic data sources necessary for the operation of the system. Each data source selected is the most basic level at which particular data may be secured. Data sources have been selected in view of Premise One stated in the preceding section. Basic source data have at least three advantages: (1) they allow for the compilation of detailed reports which may be aggregated to any level, (2) they diminish the possibility of manual errors often encountered in aggregating data before they are entered into an automated system, and

(3) they are easier and less time-consuming to provide on the part of reporting institutions.

The data sources described are applicable to any educational level and are not limited to Illinois junior colleges from which the data for this study were secured. The required data describe: (1) students, (2) faculty, (3) course and section offerings, (4) general ledger expenditures and (5) payroll ledger expenditures. A classification system identifying each variable interest is also required for each data source for the summarization and comparison of data.

Student Information

Student data are not only necessary for cost analysis procedures, but are also used for routine enrollment reports. A single data base could serve the purposes of both cost studies and enrollment reports. The following data should be collected for each student enrolled at an institution on a section basis:

1. Program or curriculum of enrollment (specific area in which the student is working toward a degree or certificate, if applicable)
2. Part- or full-time student
3. Day or evening student
4. Sex
5. Disadvantaged, handicapped, etc.
6. Race
7. In-district, out-of-district, out-of-state, etc.
8. Social security number and student name
9. Amount of fees for this course paid by the student

10. Amount of fees for this course paid in behalf of the student

11. Outside agency paying fees in 10 above

The above identified information is currently available on a student basis from some institutions. Such data could be provided through current college registration procedures or secured from forms developed for this purpose to be completed by each student. Card layouts for the above identified data are provided in Appendix H.

Faculty Load and Section Information

Faculty load information should be collected on a section basis and provisions must be made for the identification of non-instructional activities, if any, comprising the total load of each faculty member. A form for this purpose should be devised identifying each activity of the faculty member and the percentage of load assigned to the activity. For institutions utilizing data processing, part of the data concerned with sections taught could be supplied on preprinted continuous forms.

The assignment of faculty salaries to instructional and non-instructional activities is typically made on the basis of credit hours, contact hours, student credit hours, or percentages of load. While each method has both advantages and disadvantages, the use of percentages allows for accuracy in assigning salary while still providing for institutional flexibility.

Percentages can be applied to the total salary paid to the instructor identifying dollar amounts for each activity. The dollar amounts thus identified for instructional would be charged to each section. Non-instructional activities such as counseling, research, and administration should be assigned to the apporpriate discipline, department, division or institution dependent upon the nature of the activity. The percentage of load assigned to any given activity should be determined cooperatively by each faculty member and the appropriate administrative personnel (department chairman or dean) according to institutional policy.

The following example illustrates the above procedure. An instructor teaches in the area of nursing, is responsible for curriculum development in the nursing area, and serves as the division head for the health occupations. A description of her duties and the percentages of time devoted to each are given below:

Percent of Load	Activity
50%	Administration (H.O.E. Division)
20%	Curriculum Development (A.D. Nursing)
15%	Teaching NURS 100
15%	Teaching NURS 110

Assuming the instructor earns $10,000, 50% or $5,000 would be assigned to administration of the health occupations education division. This $5,000 would be prorated equally among all student credit hours generated in the health occupations division. The 20% or $2,000 assigned to curriculum development would be equally prorated among all student credit hours generated in the associated degree nursing program. Each of the classes comprising the instructional load would receive 15% of the total salary or $1,500. A cost per student credit hour based upon direct salary could be achieved by dividing the student credit hours generated by each section into the salary assigned to the class.

In addition to serving as a vehicle for the assignment of salaries, the section is the necessary entry point for other data as indicated below:

1. Course abbreviation
2. Course number
3. Course section
4. Credit hours
5. Contact hours
6. Actual enrollment at a predetermined point
7. The designed range of enrollment (desired enrollment, minimum, maximum enrollment)
8. Instructor
9. Whether or not the instruction is shared
10. The percentage of load devoted to this section by each instructor
11. Nature of instruction (lecture-discussion, lab, or practicum, independent study, programmed instruction, etc.)
12. Time offered (day or evening

An institution currently using automated data processing would already have much of this information. The instructor's role in this case would be limited to verification of the data. In other institutions, as is often the case at the secondary school level, some of the required data are kept in separate reports. The instructor then assumes the responsibility for entering all data upon a form. The result is a twofold benefit in that: (1) a single entry point for all necessary data is provided and (2) the data may be verified by the instructor to whom it is most familiar. Card layouts for faculty data are provided in Appendix H.

Course Data

Course data is comprised of information which does not fluctuate from one section to another. The U.S.O.E. Coding system and the Junior College Board system for the identification of instructional areas is consistent for all sections of a course offering. It would be superfluous, therefore, to carry this code on a section basis and the inclusion of such unnecessary data only limits available space in a card input system. Once a code has been assigned to a course, it can be internally assigned as needed to each section as part of the processing procedure.

The U.S.O.E. Code for Occupational programs is only one example of a code used to classify course source data. The use of codes becomes imperative for comparisons of data on an inter-institutional, state-wide or national basis. A partial listing as to the type of data to be provided on a course basis is provided below. Items may be deleted or added as necessitated during system implementation.

1. Common information necessary to identify various sections of a course. (e.g., course name and number)
2. A code allowing for inter-institutional, state-wide and/or national comparisons, U.S.O.E. or other.
3. A code for identifying the institution.
4. An abbreviated version of the course title.
5. Dates of course approval for reimbursement by various agencies.
6. Curriculum within which the course is normally offered.
7. Level of course offering.
8. Classification of the course as to whether or not it meets specific accreditation requirements.

A card layout for course information is provided in Appendix H.

Expenditure Data

Records of expenditures, in some form, with varying levels of refinement, are kept by each institution. Expenditures incurred for instructional needs are charged to established accounts. Cost analysis procedures must in turn assign such expenditures to measures of the educational product. It would be impossible to establish a chart of accounts indicating each instructional need and each expenditure incurred in behalf of the need.

A feasible accounting system must, therefore, be utilized which provides records necessary for the operation of the institution and cost analysis procedures. The need for refined cost analysis data should be tempered by the development of a system which is not cumbersome and overly time-consuming to the institution.

The accounting system should be developed in consideration of the types of expenditures incurred and the levels to which they are charged. Types of expenditures include: salary, contractual, travel, equipment, rentals, etc. Levels at which expenditures are incurred include: section, course, discipline, department, programs, or an expenditure incurred in behalf of the entire institution. Whatever final system is selected, it must be used uniformly by all institutions from which costs are to be determined and compared.

An accounting system suitable for cost analysis procedures and institutional record keeping is currently being implemented on a trial basis in the Illinois Public Junior Colleges. The accounting system has been cooperatively developed by the Illinois Junior College Board and Illinois Public Junior Colleges. The system could be adapted at any educational level and is presented here to illustrate necessary classifications. Particular attention is drawn to the last six digits of the code labeled as the unit cost identifier. These six digits can correspond directly to the U.S.O.E. Occupational Code previously cited and assigned to each course. The classification system as described in the following section, provides for expenditure identification to each U.S.O.E. Code directly from the general ledger of each institution. Such expenditures could in turn be assigned to the courses comprising each code.

The following listing identifies the codification system and the number of digits assigned to each category for the purposes of expenditure and resource identification:

Classification	Number of Digits
1. Fund	1
2. Function	1
3. Sub-function	1
4. Organizational unit	3
5. Object	2
6. Sub-object	1
7. Unit cost identifier	6

According to the Junior College System, a fund is a sum of money or other financial resource that is set aside for the conduct of activity stated withim limits set by the Illinois Junior College Act.

> As funds are legally restricted to certain activities it is necessary that each fund be an independent fiscal accounting entity. (Thornblad, et. al, 1970, p. 27)

The following categories have been established for the classification of funds:

1. Education
2. Building
3. Site and Construction
4. Bond and Interest
5. Auxiliary Enterprises
6. Restricted Purposes
7. Working Cash
8. Investment in Plant

Within each fund, expenditures are categorized by function. The following classification identifies established functions:

1. Instruction
2. Learning resource services
3. Student services and aids
4. Public services
5. Data processing services
6. General administration
7. Auxiliary services
8. Operation and maintenance of plant
9. General institutional services

It is further recommended that each function be subdivided according to sub-functions and/or organizational units as needed by each institution.

For example, the function of instruction could be divided into the following sub-functions:

1. Baccalaureate programs
2. Occupational programs
3. General Studies programs
4. Adult and Continuing programs

The code also allows for a sub-function, such as Occupational programs, to be broken down into organizational units and sub-units. Organizational units typically identify division or departments such as health occupations, business, social science, and engineering. Sub-units identify specialty areas within the organizational units. For example, the business department could be divided into the areas of accounting, management, secretarial science, data processing, etc.

The next level within the classification scheme is that of the object. The object code identifies the major classifications of accounting transactions as illustrated below:

1. Assets
2. Liabilities
3. Fund equity
4. Revenue
5. Expenditures
6. Contingency

The classification code also requires the identification of certain sub-objects within the object code. Expenditure accounts, for example, must allow for the identification of:

1. Salaries
2. Employee benefits
3. Contractual services
4. Commodities
5. Travel
6. Fixed charges
7. Plant utilities
8. Capital

The identification of salaries paid to administrative, instructional, or office staff is classified according to more refined sub-objects.

The most recent classification level added to the revised edition of the Uniform Accounting Manual allows for a unit cost identifier. This code may be used to identify expenditures according to the established Illinois Discipline Code classification or according to the U.S.O.E. Code for Occupational programs. A card layout for the collection of expenditure data is provided in Appendix H.

The following example identifies the type of information which may be obtained from a junior college general ledger

Fund	Education
Function	Instruction
Sub-function	Occupational programs
Organizational unit	Division of Business

Sub-unit	Secretarial Science
Object	Salary
Sub-object	Instruction, part-time
Unit cost identifier	14.0702

The preceeding expenditure identification sections have been limited to a presentation of the general ledger. While it is suitable for the assignment of most expenditures, an exception is identified in the case of salaries. The assignment of salaries for cost analysis procedures requires the use of the payroll ledger.

The following recommendations are provided for the development of a payroll ledger. The ledger should: (1) identify the total salary paid to an individual, (2) identify salaries paid on an overload basis, (3) identify salaries paid for the academic year, (4) identify salaries paid for summer teaching assignments, and (5) provide a code whereby individual salaries can be related to salaries for each discipline code in the general ledger. Card layouts for salary data are provided in Appendix H.

The Processing System

The processing system is based upon previously discussed desired student information, cost computations, analyses, and data sources. The system will be described in procedural terms. Programming necessary to achieve the necessary reports, summaries, comparisons, and analyses will not be presented. It was planned that the programming developed in this study with minor modification would be suitable for the recommended comparisons and analyses with the exception of those concerned with individual student enrollment data.

The system is based upon responsibilities shared by a central processing service and participating institutions. The processing service may be provided by existing state agencies but is by no menas limited to them. Many states are taking a hard look at data processing hardware costs and future data processing efforts may be assisted by the purchase of service packages in lieu of hardware rentals and the additional monies for personnel to operate the hardware.

The primary advantage of a central processing service is that of economy in terms of time and money. Necessary programming need only be developed once, whereas systems based on reports completed at each institution require that programming be developed at each institution or, even if centrally developed, be modified to operate within on-site hardware capabilities. The central processing service induces additional savings in on-site hardware costs. The only equipment necessary on the part of local institutions is a key punch, and it can be eliminated if data are submitted to the central processing service on uniform source documents for punching. However, since most institutions will have requirements for limited hardware for both administration and instruction, some processing can be accomplished at the local level.

The responsibility of the local institution includes only the provision of data. These data may be provided on punched cards or as indicated previously may be submitted on source documents uniform to all participating institutions. While some procedural economies may be gained if the local institution provides data input on a card format, these economies may be offset through the use of optical scanning in large systems.

Programming Requirements

Programming may be divided into two phases: (1) basic data validation and (2) programming necessary to provide the desired reports. Data are of course to be verified at each institution, but manual procedures do not diminish the importance of machine verification.

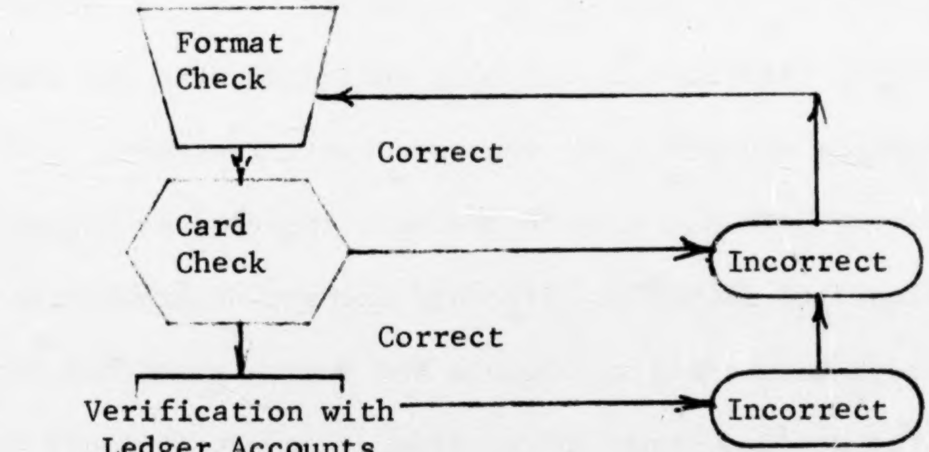
Data errors may be of two types: (1) error in format and (2) incorrect data. Format errors are easily machine checked and identified. Example of such errors are: (1) alphabetical information in numerical fields or vice versa, (2) numerical codes which are out of bounds, or (3) lack of all necessary cards for systems operation. Machine verification not only validates data but simplifies the programming necessary for various report routines.

Incorrect data may also be checked, though such errors are more difficult to identify. Standard accounting procedures are used to check totals and sub-totals and verify submitted data against existing ledger accounts. In the case of salary it would be difficult to identify an error in the amount paid to one instructor. Total salary paid to all instructors in a department, however, may be verified by comparing existing ledger accounts with submitted data.

If the submitted salary data at the department level do not match salary amounts indicated in the general ledger, a departmental error is noted. The actual identification of the error, however, requires a manual procedure to determine the shortage or overage for a particular instructor(s). Such data verification is an integral part of any accounting system, manual or computer assisted. Previous experience indicates the need for sophisticated error checking programming. As has been widely noted, the errors in any computer assisted system are human errors, not machine errors. When the vast amount and different types of data to be included in a cost analysis system are considered, the possibility of human error is evident. The following diagram indicates the flow and storage of submitted data:

ILLUSTRATION 4

Source Data Submitted by
the Institution


Format Check
Correct
Card Check
Incorrect
Correct
Verification with Ledger Accounts
Incorrect
Correct
Storage on Disk for Use in Report Programs

Report Programs

The following procedures are sequentially presented to utilize data for specific reports. Each report in turn builds upon the computations of a previous report.

Student and Faculty Information. In actual operation student data and faculty data, on a section basis, could be used for institutional reports or for reimbursement procedures when reimbursement monies are based upon a head-count, FTE, or student credit hour basis. Such data would be submitted at mid-term or some other predetermined point. Routine procedures could then be used to determine the amount of reimbursement and provide reports describing various enrollment characteristics.

Preprinted forms containing section data could then be returned to the faculty member by whom the sections were taught. Section data could be (1) verified by each faculty member and (2) assigned the appropriate percentage of load for each section, and the discipline or unit to which they are assigned could also be entered at this time. Such data could then be returned to a central processing agency for storage within the system. This procedure could be repeated for each quarter, semester, or as necessitated by reporting intervals. The entry of student, faculty, and section data becomes part of an on-going collection and reporting system and allows for all data to be determined on a current basis during the semester of assignment. End of term data is added to that already in storage as an updating process.

Faculty data cards could be used to provide measures of faculty load at any desired time period. When coupled with faculty salary cards and master card data, unit costs based only upon salary information could be computed.

Supplemental Expenditures. The assignment of faculty salary to each course and student credit hour generated in that course is also the first step in determining total costs for each section. On a yearly basis, supplemental or indirect expenditures (contractual, supplies, travel, etc.), as identified from the general ledger of each institution, are assigned using the student credit hour ratio. A supplemental expenditure card would be provided for each sub-unit code at the close of the fiscal year. Costs could then be computed on a section course, discipline etc. basis. Institutional costs would have to be determined and added to those identified at lower levels to reflect total costs.

As previously presented each course section would be identified with a code, such as the Illinois Junior College Board Discipline Code, or the U. S. O. E. Occupational Code. This same code would also be used as part of the accounting system classification. All student credit hours assigned to a particular code would then be devided into the expenditures assigned to that code providing a cost per student credit hour.

Procedures may also be developed for the treatment of capital expenditures or expenditures which supplant capital expenditures. Such procedures should be based upon empirical data and accurate records kept over a number of years. Since such data is generally lacking, the following procedures as used by Illinois Public Junior Colleges are suggested during the interim period. Facility expenditures should be amortized over a fifty-year period assigning two per cent of the total cost to students or student credit hours of any given year. Other capital expenditures such as equipment should be amortized over an eight-year period, charging twelve and one-half per cent of the expenditures to students of a given year. At the present time, refined procedures for assigning and allocating capital costs to lower level units or on an institutional level have not been developed. Costs for new facilities and equipment can be determined but replacement schedules have not been established.

In treating capital expenditures, the cautions of Vilvavsky (1966) should be taken into consideration namely that all economic variables cannot be squeezed into a single formula. If we stress replacement costs and the financial needs of programs in varying stages of development, depreciation schedules are a poor means of determining the amounts of money needed for on-going or new programs. For planning purposes consideration should be given to start-up, operating, and phase out costs. Capital expenditures would come under start-up costs and negate the value of depreciation. If resources are then provided to maintain on-going programs there is no need to consider capital costs except those of a replacement nature. The exact treatment of capital expenditures should be determined in light or resource provision as dictated by currently established policies of the many concerned agencies. The development of a distribution plan for available monies was not the intent of this study.

Resources Provided on an Enrollment Basis. Since the enrollment figures used to compute course costs are the same as those submitted for reimbursement, the amount of reimbursement received on a section basis can also be accurately determined. Reimbursement and other revenue monies can be subtracted from section costs identifying the actual cost to the local districts.

Costs and resources provided for each section form the foundation of all analyses. It is the section module which determines total costs but the enrollment in a given section which determines the amount of reimbursement. It is also at the section level that a meaningful cost to the local district may be computed and used for purposes of institutional management.

For example, costs and resources for each section should be computed based upon actual and designed maximum enrollments. As indicated in prior sections of this report classes filled to capacity result in a twofold benefit when compared with partially filled classes in that (1) total operational costs are less and (2) increased amounts of reimbursement based on increased student credit hours provide a lower cost to the local district. A useful feature of the system would be the flagging of sections with an enrollment of less than a predtermined number.

Generated Reports. Once all computations are performed, data may be aggregated according to any established coding system. The U.S.O.E.

Coding System for reporting enrollment data concerning Occupational students and the system currently used by the Illinois Public Junior Colleges have been suggested. It should be stressed, however, that summaries and comparisons are not limited to the above coding systems. Any coding system may be easily used if coded on the master card for each course and coupled with the data collected and processed on a section basis. The system is adaptable to coding variations during summary computations. The reader is referred to the Desired Comparisons and Analyses section of this chapter to review the types of reports possible.

Advantages. The following advantages of this proposed system are:

1. It provides for the identification of students served, heretofore unavailable on an accurate basis.
2. It provides economies in development and operation by using a central processing service.
3. It relies upon the most basic source data available thus allowing for the refined assignment of expenditures and the computation of section costs.
4. It provides one common data base which may be used by all agencies for reports and allows for coordinated planning by all groups.
5. It provides for summaries and cross-tabulations for any variable which may be assigned to a data source.
6. It provides for the identification of both costs and revenue and may therefore be used as a foundation for differential reimbursement based on actual costs.
7. It may easily be adapted by proper master card coding to provide data for any state-wide or national studies.
8. It utilizes existing procedures wherever possible to facilitate implementation.

Summary

This chapter has described a coordinated educational data processing system in terms of (1) desired outputs, (2) required data sources, and (3) necessary procedures for systems implementation. All of the basic data sources exist in varying stages of refinement. Systems implementation on a coordinated basis will provide accurate data at a saving of time and financial resources to both the local institution and agencies requesting reports. The generated reports as described in this chapter and as illustrated in Appendix G are of use to local institutions as well as state agencies.

A system identifying students served, the type of service rendered, and the resultant costs which is of use for the purposes of planning, resource allocation and decision making is essential to education management and will provide for a better more equitably financed educational system.

CHAPTER VI

FINDINGS AND CONCLUSIONS

This chapter is devoted to a concise summary providing: (1) the need for resource, student, service and expenditure data, (2) a description of the state-of-the-art concerning available data and processing procedures, (3) recommendations for changes necessary to accurate data identification, collection, and processing, (4) an evaluation of this study relating final accomplishments to initial objectives and (5) a recapitulation and summary of the data presented in Chapter IV, Data Presentation Analysis.

The Need for Resource, Student, Service, and Expenditure Data

The introductory chapter of this study indicated a need for (1) the accountability of resources to the purposes for which they were intended and (2) the wise expenditures of monies as may be accomplished through planning, decision making and resource allocation.

Planning, decision making, and resource allocation must be based upon hard data identifying the (1) students served, (2) the services rendered, (3) the costs of providing these services and (4) the resources which have been provided and which will be necessary to the continuance of educational services for all segments of our population. These four components are essential to the interpretation and understanding of educational cost analysis. Cost figures are much more meaningful if accompanied by the identification of persons served and the type of service rendered. For example it is less costly to provide a social studies class to students of average college intelligence than to provide a course in automotive mechanics to a group of educationally disadvantaged students at least in terms of current expenditures and costs.

For program approval, discontinuance, and resource allocation the number, capacity, and cost of on-going programs must be determined and compared with available resources; and individual and societal needs. While cost is a consideration it should certainly not be the only one nor the most important. If a program is necessary to society and if it maintains an adequate student flow, cost should certainly not be the only consideration nor the most important one. If a program is necessary to society and if it maintains an adequate student flow, it should be offered regardless of cost.

In order to properly plan, there is a need for more than just gross costs for some measure of the student product; the variables and reasons contributing to a given cost factor must be identified. As illustrated in this study the nature of instruction and limits upon section enrollment are some of the important variables which must be identified and considered. Salary, supply, and capital expenditures must be identified and costs for measures of the educational product computed. Such component costs are essential to planning, decision making, and resource allocation.

For example, there may be a need for more associate degree nurses. Can this need be met by (1) expanding current programs or (2) initiating new programs? What are the costs of either alternative and where is the potential student pool? Such questions can only be answered by (1) an adequate breakdown and categorization of cost components, (2) a determination of current enrollments and designed maximum enrollments and

(3) an assessment of the potential student pool. It may be possible to expand current programs at a fairly low cost if a student pool were available. However it would be futile to provide additional salary monies for more sections if there are no students to fill these sections.

It is only through a coordinated data processing system that all economic variables can be accurately and efficiently collected and processed. It is only through accurate variable identification that proper interpretation and decision making can be made. While a central processing system has been recommended, the need for automated data processing equipment at local institutions is not diminished. Other ongoing data processing needs of the institution in addition to the function of instruction justify or fail to justify the need for such equipment regardless of the central processing services as recommended in this study. During implementation and use computers and peripheral equipment at the local institutions will greatly assist in meeting the input needs of a centralized system.

State-of-the-Art and Recommendations

The description of current data and processing procedures is directly related to recommended changes and will therefore be presented concurrently in this section. While the recommended changes have been developed in view of the needs of this study concerned with resource accountability and allocation, for the most part, they should be considered as basic to good institutional recordkeeping at the local level. Even if a state-wide system were never to be implemented, the recommendations would still be of value to the local school district and state concerned with planning and the wise expenditure of public resources. The remainder of this section discusses each of the major data sources as presented in this study.

Individual Student Data

Individual student data of the type required for resource accountability and allocation were not available from any of the institutions participating in this study. While two of the five institutions maintained data on an individual student basis such as the program toward which the student was working and the sex of the individual, neither the identification of handicapped and disadvantaged students, nor a classification according to race or age was available. The collection of such data required for the completion of various state and federal reports was performed on an after-the-fact basis. In addition, the collective identification of students as to their major area of study in the categories of Baccalaureate, Occupational, General Studies, or Adult and Continuing Education, could only be relatively established on a section basis. The accurate identification of Occupational students enrolled in a section which could be considered as either Baccalaureate or Occupational was not possible nor was an unduplicated head count according to the above categories available.

Recommendations. Data concerning each student should be collected on a student/section basis. Such data should be collected through the use of punched cards such as those which are currently part of junior college registration procedures. A master card prepared for each student would, in addition to his name, identify the student's social security number, race, sex, etc. (see Student Data Card Format, Appendix H). Such data could then be easily transferred to existing section cards now used for the preparation of class rolls. In institutions where a punch card registration procedure is not used the required data could be collected on forms designed for this purpose which would then be used as source documents for key punching.

Faculty and Section Data

Currently in the State of Illinois at the junior college level, faculty and section data are not collected by either the Junior College Board or the Division of Vocational and Technical Education. Each of these agencies is responsible for the provision of resources and the collection of data which are to be used as a base for resource allocation. At the time of this writing, each agency specifies a different format and conducts separate data collection procedures.

The Junior College Board, currently implementing a system to collect information on a course basis, does not require the identification of the instructor teaching the course, the nature of instruction (on a section basis), nor the designed enrollment.

While faculty loads may be obtained in a general manner on a section basis from the local institutions, such data are inadequate for cost assignment and analysis procedures. At present junior colleges usually require that faculty salaries be assigned on either a contact or credit hour ratio basis. Accuracy in the assignment of salaries can only be obtained by identifying the percentage of load devoted to a specific section or other activity which should be determined on the basis of (1) the total period of time (contact hours) spent in formal instruction, (2) the time and effort necessary for preparation and student evaluation, (3) the number of students enrolled in a section, and (4) other factors related to the nature of instruction.

Recommendations. Teaching loads as stated above should be determined on the basis of effort expended as determined by the local institution and stated as a percentage of a full-time load. It is only on the basis of such assignment that accurate cost assignment and analysis procedures can be implemented. A percentage of the total teaching load should be identified for each section and where necessary, for all other activities formally assigned to a faculty member. Data describing each section such as the nature of instruction, level, time of offering, etc. (see Appendix H for sequenced data format) should be collected on an individual section basis.

General Ledger Data

The availability of data describing expenditures for travel, contractual services, supplies, and the maintenance of equipment, varied from one institution to another. Only one of the participating institutions had developed a classification of accounts suitable for cost assignment and analysis. The identification of resources received from different government agencies also varied among the participating institutions and were inadequate for the determination of resource accountability and allocation.

Recommendations. The accounting system to be implemented for the fiscal year 1971-72 in the Illinois Public Junior Colleges on a trial basis is strongly recommended. It is only through the uniform adoption of the classifications as provided in this accounting system that resources and expenditures can accurately be identified and assigned to measures of the educational product. An accounting system such as this is essential for the purposes of planning, decision making, and resource allocation.

Payroll Ledger

The refinement of payroll ledgers also varied among the participating institutions. In some cases, it was difficult to respectively identify (1) academic year salaries, (2) summer salaries, and (3) overload salaries. Salaries could not be identified on a discipline or occupational code basis and compared with general ledger data.

Recommendations. Payroll ledgers must be developed allowing for the identification of academic year salaries, overload salaries, summer salaries, and part-time salaries by instructor and should be coded to allow for the identification of total or partial salaries on a discipline or occupational code basis or by other duty classifications at the most specific level possible.

Summaries and Comparisons

Summaries and comparisons as provided in this study and as provided in reports issued by the Illinois Junior College Board and the Division of Vocational and Technical Education are respectively based upon the Illinois Junior College Board Discipline Code and the U.S. Office of Education Occupational Coding System. The accuracy and consistency in the assignment of courses to these codes, particularly in the Occupational area, is questionable. Comparisons between data obtained by these agencies is not possible since the occupational code used by the Illinois Junior College Board has not been updated to reflect changes which have been made in the U.S. Office of Education Occupational Coding System.

Recommendations. Since the Illinois Junior College Board occupational codes were initially based upon the U.S. Office of Education Occupational Coding System in existence in 1967, it is recommended that the Illinois Junior College Board codes be updated and that the current U.S. Office of Education Occupational Coding System be utilized by both the Junior College Board and the Division of Vocational and Technical Education. It is further recommended that procedures be implemented by the Division of Vocational and Technical Education and the Junior College Board to assist persons at the local institutions in the accurate assignment of courses to appropriate discipline and occupational codes and to verify such assignments across reporting institutions.

A Coordinated Systems Approach

The data obtained from the participating institutions varied in refinement and format. Multiple source documents were utilized, and personnel from various offices at each institution were consulted to obtain the data used in this study. As requests for more, different, and refined data become necessary, increasingly large amounts of money and time, on the part of local institutions and requesting agencies, will be necessary to secure the desired data. Much of the present efforts are wasted and reports have limited use and accuracy.

Recommendations. The development of a coordinated educational data processing system at the state level should be fostered. This system should designate and collect basic source data necessary for the reports of all state and federal agencies. These data should then be processed by a central processing agency capable of providing the reports requested by any agency. In consideration of the local institutions responsible for providing data, efficient collection and processing procedures should be developed on a joint basis. The coordinated collection of data, in addition to providing for efficient collection and processing procedures, will establish a common data base for all local, state and federal agencies.

Restatement of Purposes

This study was initially proposed for two central and related purposes: (1) to provide recommendations necessary for the implementation of an automated data processing system designed to collect, process, and summarize student, faculty, course, expenditure, and resource data, and (2) to provide expenditure and revenue data on a section basis using existing source documents.

In regard to the first purpose, Chapter V describing a systems approach to educational data processing and the State-of-the-Art and Recommendations section of this chapter present necessary changes in current recordkeeping and describe procedures necessary for the implementation of a coordinated educational data processing system. In regard to the second purpose, Chapter IV presents and analyzes various cost units and selected resources. The data in Chapter IV are supplemented by Appendices I and J compiled on a discipline and occupational code basis. In addition to the data provided in this study, all developed programs and computer generated printouts describing sections costs and resources on a course basis were provided to the Research and Development Unit, Division of Vocational and Technical Education, Board of Vocational Education and Rehabilitation, of the State of Illinois.

Within the time and financial parameters of this study and in view of the general lack of refined and compatible data, the purposes of this study have been fulfilled.

Summary

A summary of the data presented in this study must be limited to the education environment of the participating institutions. On the basis of these data it appears that:

1. Based on mid-term enrollments, Occupational offerings are the most costly, followed respectively by General Studies, Baccalaureate, and Adult and Continuing Education.

2. The nature of instruction greatly affects costs per student credit hour with the independent study method being most costly, followed respectively by the practicum, laboratory, lecture-laboratory (combined and separately taught), discussion, and lecture methods of instruction.

3. Enrollment as identified on a section basis greatly affects the cost per student credit hour.

4. Supplemental department expenditures while necessary to the instructional program are a relatively small part of the costs per student credit hour.

5. Reimbursement monies provided by the Division of Vocational and Technical Education tend to lessen the cost of Occupational offerings to the local district but not to the extent of equating Occupational local district costs with those assigned to traditional Baccalaureate offerings.

6. Efficient identification, collection, and processing procedures must be implemented.

7. Classification systems such as the Illinois Junior College Board Discipline Code and the U.S.O.E. Occupational Coding System are necessary for data summarization and classification,

> and procedures should be developed for the accurate assignment of courses to these codes.

In addition, it appears that the data necessary for planning, decision making, and resource allocation can only be accurately acquired through the implementation of a coordinated educational data processing system. The implementation of such a system must be supported by accurate data identification and assignment procedures at the local level. The resultant common data base of such a system for use by many agencies will allow for inter-agency planning and resource allocation so necessary yet so lacking as education attempts to meet the needs of individuals and society.

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APPENDIX A

DEPARTMENTAL SUPPLEMENTARY EXPENDITURES

APPENDIX A

DEPARTMENTAL SUPPLEMENTARY EXPENDITURES

COLLEGE A

DEPARTMENT OR DISCIPLINE	CONTRACTUAL SERVICES	TRAVEL	SUPPLIES	S&C MOVEABLE EQUIPMENT*
Accounting	$	$ 212.96		
Adult & Continuing	500.00	$ 44.48	$ 22.60	
Aeronautics	2,000.00		817.15	
Agriculture-Baccalaureate	63.00	741.54	648.35	$ 171.00
Agriculture-Occupational	243.42	570.34	1,271.90	1,168.16
Art		21.90	1,236.54	59.00
Auto Mechanics	184.59	54.24	2,522.50	15,229.46
Business-General	630.67	1,108.92	224.12	5,333.24
CIPS	230.00		1.10	275.00
Civil Engineering Technology	1,100.00	27.52	1,762.04	7,214.24
College Transfer Travel		641.50		
Concrete Technology		5.11	724.76	5,490.40

*S & C - Expenditures from the Site and Construction Fund

College A - Continued

DEPARTMENT OR DISCIPLINE	CONTRACTUAL SERVICES	TRAVEL	SUPPLIES	S&C MOVEABLE EQUIPMENT
Cosmetology	$ 381.83	$ 29.56	$2,239.95	$12,255.62
Data Processing	350.11	782.57	6,188.18	3,728.92
Dental Health	998.48	562.08	4,806.06	5,148.84
Drafting	82.50	104.05	2,685.25	6,932.47
Economics			225.85	
Electronics	512.68	31.90	1,688.18	24,346.58
English-Adult& Continuing				
English-Baccalaureate	3,182.61	545.59	1,109.11	
Foreign Languages			598.08	
Health Education		102.40		
Home Economics-Baccalaureate				
Home Economics-Occupational	3.92	25.55	555.77	
History			856.17	
Life Science	45.32	96.98	3,475.02	7,270.85
Life Science-Adult & Continuing				

College A - Continued

DEPARTMENT OR DISCIPLINE	CONTRACTUAL SERVICES	TRAVEL	SUPPLIES	S&C MOVEABLE EQUIPMENT
Machine Shop	$ 13.17		$ 533.08	$2,977.38
Mathematics			1,156.12	
Music	477.89	$ 196.81	1,508.45	5,652.02
Occupational Travel		$ 678.96		
Orientation				
Physical Ed-Men	567.30	3,490.54	3,659.58	2,126.40
Physical Ed-Women	400.29	8.00	467.31	
Physical Science	21.06	250.34	4,000.07	5,421.99
Political Science-Government	34.00	199.62	76.45	
Practical Nursing	142.27	371.45	1,332.72	
Psychology		529.01	175.35	326.73
Radio Broadcasting	41.42		475.48	508.70
Reading			1,133.38	1,600.53
Secretaries				

College A - Continued

DEPARTMENT OR DISCIPLINE	CONTRACTUAL SERVICES	TRAVEL	SUPPLIES	S&C MOVEABLE EQUIPMENT
Social Science-General		$ 291.11	$1,400.75	
Sociology		267.94	658.88	
Speech		46.08		
Supervision & Administration	$ 136.00	30.27		
Technology		77.19	624.03	
Touch Shorthand		10.00	753.40	$ 1,757.75
Welding Technology	10.96		1,057.99	4,640.65
Total	$12,353.49	$12,156.51	$52,571.72	$119,635.93

DEPARTMENTAL SUPPLEMENTARY EXPENDITURES

COLLEGE B

DEPARTMENT OR DISCIPLINE	CONTRACTUAL SERVICES	SUPPLIES	TRAVEL	MAINTENANCE EQUIPMENT	S&C MOVEABLE EQUIPMENT*
Agriculture	$ 850.83	$ 7,498.81		$ 81.01	$ 36,019.88
Art		891.46			9,235.01
Business Education	24,122.17	1,726.68		95.50	16,591.29
Education & Psychology	2,953.35	890.95		1.60	19,913.66
English		967.84		14.04	8,225.58
Foreign Language		396.32		91.00	7,843.89
Home Economics		879.43			12,436.58
Music	15.00	2,698.98		234.04	29,342.81
Math		373.03			10,550.86
P.E. Men	1,288.69	835.39		2,228.10	18,743.48
P.E. Women	536.57	534.00			8,024.20
Science Biological		4,129.06		47.77	48,828.09

*S & C - Expenditures from the Site and Construction Fund

College B - Continued

DEPARTMENT OR DISCIPLINE	CONTRACTUAL SERVICES	SUPPLIES	TRAVEL	MAINTENANCE EQUIPMENT	S&C MOVEABLE EQUIPMENT
Science Physical	$	$ 7,824.49		$ 59.03	$ 24,701.16
Social Science		194.51			9,196.62
Auto Mechanics		2,298.50			
Vocational & Technical	802.02	9,595.87			305,766.34
Athletics		288.72			11,957.98
Culinary Arts		634.80			97,790.43
Data Processing	1,452.21	166.39			
Nursing		413.81			7,914.02
Library Resources		54,517.95		79.12	150,712.16
Other	2,933.55				4,524.22
Interior Design					8,032.06
Moving & Shipping					11,713.37
Administration					94,061.45
Total	$34,954.39	$97,756.99		$2,931.21	$952,125.14

DEPARTMENTAL SUPPLEMENTARY EXPENDITURES

COLLEGE C

DEPARTMENT OR DISCIPLINE	SERVICES	SUPPLIES	TRAVEL	CAPITAL OUTLAY	FIXED CHARGES	OTHER
Adult & Continuing		$ 1,997.00	$ 745.00	$ 659.00		
Agriculture	$ 172.00	2,436.00	408.00	2,444.00		
Biological Science	77.00	6,387.00	211.00	3,612.00		
Business	140.00	1,154.00	405.00	322.00		
Educational Services	8.00	424.00		4,174.00		
Engineering Sciences						
Fine Arts	35.00	901.00		161.00		
General Instruction	2,546.00		1,676.00	33,571.00	$10,657.00	$709.00
General Studies (English)		6.00				
Health Occupations	170.00	5,056.00	912.00	17,995.00		
Home Economics		1,367.00				
Humanities	14.00	210.00	189.00	343.00		

College C - Continued

DEPARTMENT OR DISCIPLINE	SERVICES	SUPPLIES	TRAVEL	CAPITAL OUTLAY	FIXED CHARGES	OTHER
Journalism						
Mathematics	$ 7.00	$ 426.00		$ 436.00		
Office Occupations	3,123.00	3,798,00	$ 755.00	5,403.00	$52,272.00	
Physical Science	8.00	14,874.00	217.00	5,612.00		
Social Science	112.00	619.00	122.00	1,092.00		
Technical	207.00	7,789.00	29.00	85,041.00		
Trades and Industry	103.00	3,741.00		8,770.00		
Total	$6,722.00	$51,185.00	$5,669.00	$169,635.00	$62,929.00	$709.00

DEPARTMENTAL SUPPLEMENTARY EXPENDITURES

COLLEGE D

DEPARTMENT OR DISCIPLINE	CONTRACTUAL SERVICES	SUPPLIES	TRAVEL	CAPITAL OUTLAY	RENTALS	OTHER
AGRICULTURE						
Chairman's Office	$ 80.14	$ 188.40	$ 628.80			
General		597.54	61.95			
Marketing		471.96		$1,016.25		
Production	32.63*	892.02	372.55	1,568.58		
Bus. Mgt.	173.75	877.01	383.79	1,563.23		
Mechanics	38.50	3,085.02	410.70	8,216.06		$49.16
Sub-Total	$259.76	$6,111.95	$1,857.79	$12,364.12		$49.16
BUSINESS						
Chairman's Office		708.08	321.56			
General		340.76	431.39			
Accounting		136.53	273.51			
Data Processing		457.95	270.37	1,431.70		8.94
Management		41.90	595.20			
Secretarial	1,664.33	608.24	615.80	5,560.48	105.00	
Sub-Total	$1,664.33	$2,293.46	$2,507.83	$6,992.03	$105.00	$8.94

College D - Continued

DEPARTMENT OR DISCIPLINE	CONTRACTUAL SERVICES	SUPPLIES	TRAVEL	CAPITAL OUTLAY	RENTALS	OTHER
COMMUNICATIONS						
Chairman's Office	$ 13.78	$ 158.47	$ 572.50	$ 370.00		
Communications	205.28	2,904.57	2,122.73			$130.00
Language	35.00	420.23	544.30			
Sub-Total	$254.06	$3,483.27	$3,239.53	$370.00		$130.00
CREATIVE ARTS						
Chairman's Office	44.45	9.92	247.40			
Art	42.60	1,582.22	824.80	$ 710.64		32.90
Music	836.70	2,350.22	1,820.25	2,807.64	$120.00	444.85
Speech		20.21	42.90			
Drama	300.00	1,284.39	1,866.24			1,959.09
Sub-Total	$1,223.75	$5,246.96	$4,715.79	$3,518.28	$120.00	$2,436.84
ENGR. & INDUST.						
Chairman's Office	41.03	453.66	1,431.05	674.00		220.80
General Technology	17.40	6,733.39	422.78	5,399.52		

College D - Continued

DEPARTMENT OR DISCIPLINE	CONTRACTUAL SERVICES	SUPPLIES	TRAVEL	CAPITAL OUTLAY	RENTALS	OTHER
ENGR. & INDUST. (Cont.)						
Architectural Drafting	$ 78.00	$ 2,294.14	$1,419.50	$1,419.50	$350.00	$ 3.00
Industrial Drafting	15.50	51.19		465.00		
Chemical Technology		2,454.01	7.00	3,796.95		
Civil Technology	100.00	820.78	70.63	1,274.66		$35.00
Electronic Technology		2,382.30	399.00	11,018.76		
Engine Power Technology	75.00	2,771.35	278.87	3,800.00	46.81	16.19
Mechanical Technology	640.94	7,370.60	531.04	31,061.40	113.77	
Police Science	40.00	297.82	747.18			10.00
Sub-Total	$1,007.87	$25,629.24	$5,307.05	$62,791.77	$510.58	$284.99
GENERAL INSTRUCTION						
Chairman's Office	$2,334.04	$6,802.17	$1,018.67	$35,005.18		$870.44

College D - Continued

DEPARTMENT OR DISCIPLINE	CONTRACTUAL SERVICES	SUPPLIES	TRAVEL	CAPITAL OUTLAY	RENTALS	OTHER
HEALTH						
Chairman's Office	$ 60.02	$ 752.35	$ 758.73	$ 57.70		
General		1,065.62	61.40	282.00		
Child Development		186.44	356.38			
Dental Hygiene						
Med. Recds. Tech.		541.27	204.50	2,754.83		
Operating Room Assistant		1,150.44	188.60	575.90	$15.00	
Physical Therapy Assistant	191.34	892.97	614.72	2,644.89	18.75	$150.00
Practical Nurse		212.51	313.57	18.90		300.00
Registered Nurse		679.27	524.70			505.20
Sub-Total	$251.36	$5,480.87	$3,022.60	$6,334.22	$ 3.75	$955.20
MATH & SCIENCE						
Office	$39.25	$ 64.99	$ 319.97	$ 420.00		
Astronomy & Biology		11,621.33	503.09	15,279.50	$8.15	

College D - Continued

DEPARTMENT OR DISCIPLINE	CONTRACTUAL SERVICES	SUPPLIES	TRAVEL	CAPITAL OUTLAY	RENTALS	OTHER
MATH & SCIENCE (Cont.)						
Chemistry		$ 4,868.73	$ 82.00	$ 7,569.05		
Geology		16.95				
Math		1,303.98	742.81	247.50		
Physical Sc.		2,383.19	120.24	2,684.67		
Physics		3,535.09	113.26	10,283.75		
Sub-Total		$23,794.26	$1,881.37	$36,484.47	$8.15	
SOCIAL SCIENCE						
Chairman's Office	$ 20.45	$ 798.96	$ 65.42	$327.65		
Economics		31.19	149.50			
Geography	2.88	114.05	81.70			
History		1,068.89	277.00			
Social Science		2,601.69	357.03	445.83		
Sociology		33.06	211.92		$8.15	
Political Science		66.11	35.50			
Psych. & Educ.		121.61	239.02			

College D - Continued

DEPARTMENT OR DISCIPLINE	CONTRACTUAL SERVICES	SUPPLIES	TRAVEL	CAPITAL OUTLAY	RENTALS	OTHER
SOCIAL SCIENCE (Cont.)						
Physical Educ.	$1,261.00	$1,898.33	$1,408.33		$8,873.80	$22.00
Sub-Total	$1,284.33	$6,733.89	$2,825.81	$733.48	$8,881.95	$22.00
TOTAL	$8,256.17	$85,576.07	$26,376.44	$164,633.55	$9,659.43	$4,757.57

DEPARTMENTAL SUPPLEMENTARY EXPENDITURES

COLLEGE E

DEPARTMENT OR DISCIPLINE	SUPPLIES & MATERIALS	S & C* EQUIPMENT
BUSINESS		
**B Accounting		$ 211.13
***O Accounting & Business	$ 59.29	2,056.93
O AG-Marketing	3,266.54	9,399.79
B Business		528.78
O Data Processing	3,046.04	90,001.04
O Secretarial Science	2,138.30	16,973.88
B Agriculture	151.24	183.57
Sub-Total	$8,661.41	$119,355.12
COMMUNICATIONS		
B Art	$3,589.63	$ 3,016.17
B English	1,151.33	9,814.96
B Speech		25.75
B Foreign Language	353.39	2,094.97

*Expenditures from the Site and Construction Fund
**B = Baccalaureate
***O = Occupational

College E - Continued

DEPARTMENT OR DISCIPLINE	SUPPLIES & MATERIALS	S & C EQUIPMENT
COMMUNICATIONS (Cont.)		
B Music	$ 785.77	$ 1,876.56
Sub-Total	$ 5,880.12	$ 16,828.41
LIFE SCIENCE		
B Biology	$ 2,602.62	$ 6,996.22
O Dental Assisting	2,587.73	790.48
O Dental Hygiene	2,265.14	24,874.32
O Nursing	1,046.19	3,423.67
O Life Science	1,101.44	35.96
Sub-Total	$ 9,603.12	$ 36,120.65
MATHEMATICS & PHYSICAL SCIENCE		
O Auto-Farm	$ 4,428.53	$ 19,998.54
B Chemistry	2,814.84	5,333.06
O Construction Tech.	325.17	14,068.14
O Drafting	3,078.14	34,669.56
O Electronics	4,458.64	11,186.98
B Mathematics	57.26	1,779.16

College E - Continued

DEPARTMENT OR DISCIPLINE	SUPPLIES & MATERIALS	S & C EQUIPMENT
MATHEMATICS & PHYSICAL SCIENCE (Cont.)		
O Micro Precision	$ 2,785.00	$ 2,463.85
O Physical Science	873.72	893.61
B Physics	2,325.00	29,246.39
Sub-Total	$21,146.30	$119,639.29
PHYSICAL EDUCATION		
B Men	$ 838.46	$ 5,242.40
O Men	406.00	
B Women	691.43	505.55
O Women	77.60	
O Recreation & Supervision	47.33	1,764.97
B Summer School	7.20	
O Summer School		
B Evening	2,717.47	
O Evening	2,749.41	
B Other	10,960.37	275.75
O Other	8,296.20	2,706.15
Sub-Total	$26,791.47	$ 10,494.82

College E - Continued

DEPARTMENT OR DISCIPLINE	SUPPLIES & MATERIALS	S & C EQUIPMENT
SOCIAL SCIENCE		
B Geography	$ 82.75	$ 1,124.50
B History	192.03	651.46
B Political Science	14.31	
B Psychology	6.34	396.92
B Sociology		
O Survey of Social Science	4.45	
O Teacher Aid	243.74	444.53
B Economics	28.88	
B Philosophy		
Sub-Total	$ 572.50	$ 2,617.41
TOTAL	$72,654.92	$305,055.70

APPENDIX B

INSTITUTIONAL EXPENDITURE SUMMARY

APPENDIX B

INSTITUTIONAL EXPENDITURE SUMMARY

COLLEGE A

Purpose	Included	Not Included	Total
Instruction	$1,175,329.64	$310,106.44	$1,485,436.08
Learning Resource Center	54,490.08	37,504.22	91,994.30
Student Personnel Services	128,750.35		128,750.35
Research	8,037.10		8,037.10
Administration	179,369.41		179,369.41
Operation of Physical Facilities	82,009.56		82,009.56
Maintenance of Physical Facilities	5,805.87	82,437.50	88,243.37
TOTAL	$1,633,792.01	$430,048.16	$2,063,840.17

INSTITUTIONAL EXPENDITURE SUMMARY

COLLEGE B

Purpose	Included	Not Included	Total
Administration	$ 423,189.73		$ 423,189.73
Instructional Programs	1,835,343.58		1,835,343.58
Maintenance	3,294.74		3,294.74
Health Services	10,367.53		10,367.53
Insurance	52,351.00		52,351.00
Athletic Program	32,290.51		32,290.51
Student Services	25,322.80	$ 6,892.70	32,215.50
Activity Fees	59,401.20		59,401.20
Stores Inventory	4,564.25		4,564.25
Payroll Remittance	1,518.49		1,518.49
Operations	128,058.16		128,058.16
Maintenance	56,220.69		56,220.69
Fixed Charges		213,440.49	213,440.49
Rental	3,533.40		3,533.40
Interest	16,715.02		16,715.02
Insurance	15.50		15.50
Other			
TOTAL	$2,659,079.40	$220,333.19	$2,872,519.79

INSTITUTIONAL EXPENDITURE SUMMARY

COLLEGE C

Purposes	Included	Not Included	Total
Instructional Programs	$ 682,932.00	$221,907.00	$ 904,839.00
Learning Resource Center	39,174.00	32,618.00	71,792.00
Student Personnel Services	72,725.00	1,533.00	74,258.00
Auxiliary Services	50,989.00	2,769.00	53,758.00
General Administration	137,213.00	1,071.00	138,284.00
Operation of Physical Facilities	41,062.00		41,062.00
General Institutional Expense	57,957.00	10,954.00	68,911.00
Operation of Physical Facilities	57,475.00	129,822.00	187,297.00
TOTAL	$1,139,527.00	$400,674.00	$1,540,201.00

INSTITUTIONAL EXPENDITURE SUMMARY

COLLEGE D

Purpose	Included	Not Included	Total
Mathematics and Science	$ 375,709.44	$ 36,484.47	$ 412,193.91
Communications	378,027.12	370.00	378,397.12
Creative Arts	237,260.95	4,818.28	242,079.23
Social Sciences	336,020.97	773.48	336,794.45
Health Occupations	230,677.98	6,334.22	237,012.20
Engineering and Industrial Occupations	419,711.27	62,792.37	482,503.64
Business Occupations	271,750.55	6,992.18	278,742.73
Agriculture Occupations	85,926.67	12,593.27	98,519.94
Instructional Administration	152,126.46	515.00	152,641.46
General Instruction	21,508.54	35,005.18	56,513.72
Learning Resource Center	136,125.94	100,160.96	236,286.90
Instructional Materials	6,942.10	22,129.53	29,071.63
Admissions	35,739.94	97.35	35,837.29
Testing and Counseling	143,367.62	746.10	144,113.72
Health Services	18,505.60	188.79	18,694.39
Student Activities	56,703.58	3,516.28	60,219.86
Financial Aids and Placement	35,178.23	503.00	35,681.23
Registrar's Office	63,590.09		63,590.09
Student Services Administration	30,838.42		30,838.42
Computer Services	105,336.20	80,466.87	185,803.07

College D - Continued

Purpose	Included	Not Included	Total
College Board	$ 19,921.64		$ 19,921.64
Executive Office	70,609.40	$ 552.00	71,161.40
Business Affairs	100,330.45	1,943.57	102,274.02
General Institutional	75,501.73		75,501.73
Custodian	9,182.18	2,503.74	11,685.92
Maintenance	25,880.84	1,290.39	27,171.23
General Operations	293,265.61	12,652.70	305,918.31
Building Fund	8,692.70	165,220.14	173,912.84
TOTAL	$3,744,432.22	$558,649.87	$4,303,082.09

INSTITUTIONAL EXPENDITURE SUMMARY

COLLEGE E

Purpose	Included	Not Included	Total
Baccalaureate Oriented	$ 564,562.00		$ 564,562.00
Occupational Oriented	695,860.00		695,860.00
General Studies	25,227.00		25,227.00
Adult Continuing Education	21,197.00		21,197.00
Educational Administration	132,596.00		132,596.00
Refunds and Physical Examination	37,052.00		37,052.00
Learning Resource Center	107,909.00		107,909.00
Instructional Resource Center	42,142.00		42,142.00
Admissions and Records	46,338.00		46,338.00
Counseling, Testing and Advising	73,631.00		73,631.00
Student Activities, Aid and Placement	17,237.00		17,237.00
Business Administration	73,313.00		73,313.00
Other	165.00		165.00
Research	67,379.00	$ 75,575.00	142,954.00
College Board	21,878.00		21,878.00
President's Office	50,898.00		50,898.00
Business Office	83,281.00		83,281.00
Information Services	45,085.00		45,085.00
Operation of Physical Facilities	1,100.00		1,100.00
Operation of Physical Facilities	131,310.00		131,310.00

College E - Continued

Purpose	Included	Not Included	Total
Maintenance of Physical Facilities	$ 31,702.00	$ 534.00	$ 32,236.00
Fixed Charges Rent and Interest	11,268.00	193,269.00	204,537.00
Equipment for Instruction		305,056.00	305,056.00
Learning Resource Center		78,926.00	78,926.00
Student Services and Aids		10,905.00	10,905.00
General Administration		14,853.00	14,853.00
Acquisition of Site		227,495.00	227,495.00
TOTAL	$2,281,230.00	$906,613.00	$3,187,843.00

APPENDIX C

ENROLLMENT COMPARISONS

APPENDIX C

ENROLLMENT COMPARISONS

	Total Student Credit Hours	
Institution	In This Study	Submitted to the Junior College Board
A	50,735	50,882
B	67,660	66,469
C	31,444	30,831
D	93,232	95,608[1]
E	52,236[2]	56,003

[1] Includes course taught during the second half of the previous year's spring semester.

[2] Section data describing credit equivalency courses were not available.

APPENDIX D

VOCATIONAL REIMBURSEMENT

APPENDIX D

VOCATIONAL REIMBURSEMENT

	Computed in this Study			Submitted to the Division of Vocational & Technical Education	
Institution		Student Credit or Contact Hours[1]	Dollars Reimbursed	Student Credit or Contact Hours[1]	Dollars Reimbursed
A	Regular	18,898[2]	170,079.00	18,077[2]	169,263
	Adult	9,981	2,179.00	730	2,179
					171,442
B	Regular	9,280	97,440.00	9,416	98,869
	Adult	None	None	None	None
C	Regular	3,044	38,812.50	3,052	38,914
	Adult	2,956	609.00	2,956	609
D	Regular	21,181	206,511.00	21,176	206,466
	Adult	11,660	1,839.00	11,660	1,839
E	Regular	20,570[2]	113,135.00	20,578[2]	113,179
	Adult	not available	not available	8,158	1,089

[1] Regular students reimbursed on a student credit hour basis while adult students were reimbursed on a contact hour basis.

[2] Quarter hours reimbursed.

VOCATIONAL REIMBURSEMENT (Cont.)

	Purpose	Reported Dollars by Division of Vocational and Technical Education
Institution A	Disadvantaged	None
	Handicapped	None
	Equipment, Rental	11,581
	Equipment, Purchase	40,977
	Special Projects	2,572
Institution B	Disadvantated	2,240
	Handicapped	None
	Equipment, Rental	11,080
	Equipment, Purchase	168,291
	Special Projects	18,740
Institution C	Disadvantaged	None
	Handicapped	None
	Equipment, Rental	30,935
	Equipment, Purchase	51,737
	Special Projects	None
Institution D	Disadvantaged	3,214
	Handicapped	426
	Equipment, Rental	21,910
	Equipment, Purchase	32,715
	Special Projects	None
Institution E	Disadvantaged	2,376
	Handicapped	712
	Equipment, Rental	None
	Equipment, Purchase	37,188
	Special Projects	44,818

APPENDIX E

REVENUE SOURCES

APPENDIX E

REVENUE SOURCES

INSTITUTION A

Source and Fund	Amount in Dollars	Percentage of Total Budget by Fund
Education Fund		
Taxes, Local	426,267.23	21.65
Junior College Aid	628,230.50	31.91
Vocational Aid	171,510.00	8.73
Federal Resources	131,698.15	6.67
Interest on Investments	23,978.66	1.22
Tuition	233,576.68	11.86
Tuition (Charge Backs)	268,292.59	13.63
Textbook (Rentals & Sales)	57,371.51	2.91
Transcript & Enrollment Fees	26,076.60	1.32
Other	1,890.10	.10
TOTAL	1,968,892.00	100.00
Building Fund		
Taxes, Local	106,565.65	36.41
Junior College Aid	148,000.00	50.56
Tuition	30,000.00	10.25
Farm Receipts	8,131.16	2.78
TOTAL	292,696.81	100.00

REVENUE SOURCES

INSTITUTION B

Source and Fund	Amount in Dollars	Percentage of Total Budget by Fund
Education Fund		
Taxes, Local	1,131,474.46	39.48
Junior College Aid	1,030,274.98	35.95
Vocational Aid	66,889.89	2.33
Tuition	552,590.79	19.27
Athletic Receipts	1,586.76	.06
Student Fees	12,672.57	.44
Student Services	55,199.91	1.93
Interest on Investments	11,454.25	.40
Insurance Claims	3,879.76	.14
TOTAL	2,866,023.37	100.00
Building Fund		
Taxes, Local	746,368.80	83.26
Loan From S & C Fund	150,000.00	16.73
Other	68.31	.01
TOTAL	896,437.11	100.00

REVENUE SOURCES

INSTITUTION C

Source and Fund	Amount in Dollars	Percentage of Total Budget by Fund
Education Fund		
Taxes, Local	447,425.00	33.74
Tuition (Charge Backs)	71,133.00	5.36
Junior College Aid	471,849.00	35.58
Vocational Aid	122,200.00	9.21
Federal Revenue		
Higher Education Act	3,399.00	.26
College Work Study	43,483.00	3.37
Other	171.00	.01
Student Tuition	102,800.00	7.75
Student Fees	24,640.00	1.86
Activity Fees	4,683.00	.37
Book Store	25,503.00	1.92
Interest on Investment	5,341.00	.40
Other	3,517.00	.27
TOTAL	1,326,144.00	100.00
Building Fund		
Taxes, Local	145,472.00	98.20
Rentals	1,800.00	1.22
Interest on Investments	248.00	.16
Other	621.00	.42
TOTAL	148,141.00	100.00

REVENUE SOURCES

INSTITUTION D

Source and Fund	Amount in Dollars	Percentage of Total Budget by Fund
Education Fund		
Taxes, Local	2,594,843.30	49.70
Tuition	746,468.18	14.30
Student Fees	54,073.00	1.04
Student Charges	4,543.63	.09
Junior College Aid	1,477,801.00	28.03
Vocational Aid	261,229.82	5.00
Other State Resources	32,054.53	.61
Interests on Investments	46,953.23	.90
Other	3,157.80	.06
TOTAL	5,221,124.49	100.00
Building Fund		
Taxes, Local	772,079.69	99.34
Interest on Investments	4,152.15	.53
Other Revenue	1,000.00	.13
TOTAL	777,231.84	100.00

REVENUE SOURCES

INSTITUTION E

Source and Fund	Amount in Dollars	Percentage of Total Budget by Fund
Education Fund		
Taxes, Local	1,030,841.61	36.47
Tuition	722,618.71	25.55
Junior College Aid	861,052.50	30.45
Vocational Aid	177,016.00	6.26
Federal Resources	25,984.07	.92
Refunds	5,189.47	.18
Other Revenue	5,028.54	.17
TOTAL	2,827,730.90	100.00
Building Fund		
Taxes, Local	1,095,810.00	92.34
Federal Resources	14,300.00	1.20
Vocational Aid	75,000.00	6.32
Other	1,646.00	.14
TOTAL	1,186,756.00	100.00

APPENDIX F

CARD DATA FORMAT AS USED IN THIS STUDY

APPENDIX F

CARD DATA FORMAT AS USED IN THIS STUDY

Master Data Card

The master course data consisted of the following fields as established by the Junior College Board Apportionment System.

	a	CC 1	Form - Card code X
	b	CC 2-4	District number
	c	CC 5	Campus number
	d	CC 6	Quarter/or Semester - Q or S. Designate method used in awarding credit.
*	e	CC 7-8	Maximum enrollment
	f	CC 9-13	Course (department) prefix - an alpha numeric representation of course prefix left adjusted
	g	CC 14-17	Course number - alpha numeric right adjusted
	h1	CC 18	Program Identification - Baccalaureate is 1, Occupational is 2, General Studies is 3, Adult and Continuing Education is 4, Organized Research is 7 and Public Services is 8.
*	h2	CC 19-24	Discipline code - numeric - Do not use decimals - right adjusted.
	h3	CC 25	Not used - Blank
	i	CC 26-60	Course Name
	j	CC 61	Type of credit - code 1 is credit, code 2 is credit equivalency, or code 3 is other
	k	CC 62-65	Credit hour value - enter 4 digits of which 2 are decimals
			Example: 1.25 credit hours would be entered as 0125 Example: 1.00 credit hours would be entered as 0100
	l	CC 66	Variable hour code V or blank - this item is used only if credit hour value is variable. If credit hour value is variable enter maximum credit hour value in card columns 62-65.
	m	CC 67-68	Lecture (contact) hours per week, when offered on a regular term basis. - Round to nearest whole number.
	n	CC 69-70	Laboratory (contact) hours per week, when offered on a regular term basis. - Round to nearest whole number.
	o	CC 71	Degree or certificate - code 1 if credit counts for associate degree, 2 for certificate, 3 for both, 4 for neither

CARD DATA FORMAT AS USED IN THIS STUDY (Cont.)

	p	72	Blank
*	q	CC 73	Level of offering
	q	CC 74-79	Approved date - enter month by numeric in card columns 74-75, day in card columns 76-77 and year in card columns 78-79
	r	CC 80	Reimbursement code - enter 1 if reimbursable, enter 2 if non-reimbursable

*Data updated or entered for purposes of this study.

Salary Card

CC 1	Card code (1)
CC 2-4	District number
CC 5-7	Blank
CC 8	Base of appointment
CC 9	Quarter or semester
CC 10-15	Blank
CC 16-20	Instructor number
CC 21-76	Blank
CC 77-80	Salary in dollars

Faculty Information

CC 1	Card code (2)
CC 2-4	District number
CC 5-7	Supplementary code
CC 8	Base of appointment: Full-time = 1, part-time = 2
CC 9	Term of appointment: Summer = 1, Fall = 2, Winter = 3 Spring = 4.
CC 10-11	Blank
CC 12-15	Adult Vocational Reimbursement in dollars
CC 16-20	Instructor number

CARD DATA FORMAT AS USED IN THIS STUDY (Cont.)

CC 21-24	Percent of appointment applied to this course or contact hours
CC 25	Shared instruction: No = b, Yes = 1
CC 26-34	Blank
CC 35-40	Department abbreviation
CC 41-45	Course Number or counseling =-1, administration = -2, other = -3
CC 46-47	Course section
CC 48-51	Credit hours
CC 52	Blank
CC 53	Nature of instruction: laboratory = 1, lecture = 2, practicum = 3, independent study = 4, discussion = 5, lecture lab = 6
CC 54-55	Mid-term enrollment
CC 56-57	Blank
CC 58	Overload code: No = b, Yes = 1
CC 59-60	Blank
CC 61	Time offered: Day = 1, Evening = 2
CC 62-73	Instructor's name
CC 74-76	Vocational enrollment
CC 77-80	Salaries for part time, overload, shared instruction, administration, counseling or other

Supplementary Expenditure Card

CC 1	Card Code
CC 2-4	District Number
CC 5-7	Expenditure Assignment Code
CC 8-30	Expenditure Description
CC 31-64	Blank
* CC 54-62	Institutional Expenditures

* Entered on first card of supplemental expenditures only.

CARD DATA FORMAT AS USED IN THIS STUDY (Cont.)

CC 64-70	Supply Expenditures
CC 71-72	Blank
CC 73-80	Other Department Expenditures

APPENDIX G

EXAMPLES OF GENERATED REPORTS

APPENDIX G

EXAMPLES OF GENERATED REPORTS

1. Faculty Load by Instructor
2. Cost Detail by Section
3. Cost Detail by Discipline or Occupational Code*
4. Cost Enrollment Detail by Section
5. Cost Enrollment Detail by Discipline or Occupational Code
6. Cost and Reimbursement Detail by Course
7. Cost and Projected Revenue Detail by Course
8. Cost and Resource Detail by Discipline or Occupational Code
9. Cost and Projected Resource Detail by Discipline or Occupational Code*

*Copies of Reports 3 and 9 are not included since they report essentially the same data under the same heading but aggregated on a different basis than Reports 2 and 7 respectively.

APPENDIX G

REPORT 1 FACULTY LOAD BY INSTRUCTOR

Heading	Description
PRO	Identifies the major program to which a course is assigned. Identified under this heading are: BAC = Baccalaureate OCC = Occupational GEN = General Studies ADU = Adult and Continuing Education
DIS CODE	Identifies the discipline code or U.S.O.E. Occupational Code assigned to a course by each college. For those courses designated by an OCC the U.S.O.E. Occupational Code has been assigned. All other program codes have been assigned the Illinois Junior College Board Discipline Code.
PREFIX	Identifies the course prefix or abbreviation assigned to each course by the college.
COURSE NUM	Identifies the course number assigned to each course by the college.
COURSE SEC	Identifies the section assigned to each course by the college.
CRE HRS	Identifies the credit hours assigned to each course by the college.
INST TYPE	Identifies the nature of instruction assigned to each course for the purpose of this study: LAB = Laboratory LEC = Lecture L&L = Lecture and Laboratory IND = Independent Study PRC = Practicum DIS = Discussion
CON HRS	Identifies the contact hours for each section as obtained from the college catalog.
T	Identifies the time offered: D = day E = evening
LOAD FAC	Indicates the percentage of load assigned to each course based on contact hours in four of the institutions and on actual percentage of load for the fifth.

FACULTY LOAD BY INSTRUCTOR (Cont.)

Heading	Description
SALARY	Identifies the salary assigned to each section using the above identified percentages. Totals are provided for each quarter or semester and for the year.
ENROLL MID	Identifies the actual mid-term enrollment for each section as provided by each college and used in this study.
ENROLL MAX	Identifies the maximum enrollment for each section as provided by each college and used in this study for projections.
STUDENT COST MID MAX	Identifies the cost for each student based on direct section salaries and the mid-term and maximum enrollments described above.
STUD CRDT COST MID MAX	Identifies the cost for each student credit hour based on direct section salaries and the mid-term and maximum enrollments described above.
COURSE DESCRIPTION	Identifies the abbreviated course titles as provided in the Illinois Junior College Board Reapportionment System. ****'s identify those courses reassigned on the basis of fiscal 1969-70 data.
SH	Indicates whether or not the instruction of a course was shared.
OV	Indicates whether or not a course was taught on an overload basis.

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                                                     FACULTY LOAD BY INSTRUCTOR
                                                                                                                     PAGE    1E
INSTRUCTOR NUMBER          5
PRO   DIS PREFIX     COURSE CRE INST  CON   T LOAD    SALARY  ENROLL     STUDENT    COST   STUD CRDT  COST      COURSE DESCRIPTION       SH OV
     CODE            NUM SEC HRS TYPE HRS     FAC              MID MAX     MID      MAX      MID      MAX
                                                                                                      ADMINISTRATION
            PEM                                 0.0    2701.00
BAC   20600 PEM      102 01  1.00 LAB  2.00 D 0.17    450.17   4   25   112.54    18.01   112.54    18.01 **** ADAPTIVE PHYSICAL EDUC NO NO
BAC   20600 PEM      103 02  1.00 LAB  2.00 D 0.17    450.17  32   35    14.07    12.86    14.07    12.86 **** PHYSICAL FITNESS ACTIV NO NO
BAC   20600 PEM      103 03  1.00 LAB  2.00 D 0.17    450.17  33   35    13.64    12.86    13.64    12.86 **** PHYSICAL FITNESS ACTIV NO NO
OCC   10602 REC      104 01  4.00 L&L  6.00 D 0.50   1350.50  24   30    56.27    45.02    14.07    11.25 GAME LEADERSHIP              NO NO
                             ------       -----   ---- --------  --- ---   ------------------------------------------------------------------
TOTALS FOR FALL      TERM--> 7.00        12.00    1.01  5402.01  93 125    TOTAL COURSES TAUGHT=   4      TOTAL STUDENT CREDIT HOURS= 165.00

                                                                                                      ADMINISTRATION
            PEM                                 0.0    2536.00
BAC   20600 PEM      102 01  1.00 LAB  2.00 D 0.20    506.60  14   25    36.19    20.26    36.19    20.26 **** ADAPTIVE PHYSICAL EDUC NO NO
BAC   20600 PEM      103 01  1.00 LAB  2.00 D 0.20    506.60  14   25    36.19    14.47    36.19    14.47 **** PHYSICAL FITNESS ACTIV NO NO
BAC   20600 PEM      103 02  1.00 LAB  2.00 D 0.20    506.60   9   35    56.29    14.47    56.29    14.47 **** PHYSICAL FITNESS ACTIV NO NO
BAC   20600 PEM      107 01  1.00 LAB  2.00 D 0.20    506.60  12   25    42.22    20.26    42.22    20.26 **** GYMNASTICS              NO NO
BAC   20600 PEM      120 05  1.00 LAB  2.00 D 0.20    506.60  34   13    14.90    38.97    14.90    38.97 BASKETBALL                   NO NO
                             ------       -----   ---- --------  --- ---   ------------------------------------------------------------------
TOTALS FOR WINTER TERM--> 5.00           10.00    1.00  5069.00  33 133    TOTAL COURSES TAUGHT=   5      TOTAL STUDENT CREDIT HOURS=  83.00

BAC   20000 PEC      133 06  1.00 LAB  2.00 D 0.25    633.25  19   40    33.33    15.83    33.33    15.83 BOWLING                      NO NO
BAC   20000 PEC      134 06  1.00 LAB  2.00 D 0.25    633.25  40   36    15.83    17.59    15.83    17.59 GOLF                         NO NO
            PEM                                 0.0    2536.00                                        ADMINISTRATION
BAC   20600 PEM      103 01  1.00 LAB  2.00 D 0.25    633.25  24   35    26.39    18.09    26.39    18.09 **** PHYSICAL FITNESS ACTIV NO NO
BAC   20600 PEM      121 02  1.00 LAB  2.00 D 0.25    633.25  30   40    21.11    15.83    21.11    15.83 **** VOLLEYBALL              NO NO
                             ------       -----   ---- --------  --- ---   ------------------------------------------------------------------
TOTALS FOR SPRING TERM--> 4.00            8.00    1.00  5069.00 113 151    TOTAL COURSES TAUGHT=   4      TOTAL STUDENT CREDIT HOURS= 113.00

                             ======       =====        ======== === ===   ==================================================================
TOTALS FOR YEAR--->          16.00        30.00        15540.01 289 409    TOTAL COURSES TAUGHT= 13       TOTAL STUDENT CREDIT HOURS= 361.00



INSTRUCTOR NUMBER           10
PRO   DIS PREFIX     COURSE CRE INST  CON   T LOAD    SALARY  ENROLL     STUDENT    COST   STUD CRDT  COST      COURSE DESCRIPTION       SH OV
      CODE           NUM SEC HRS TYPE HRS     FAC              MID MAX     MID      MAX      MID      MAX
BAC  11100 BUS       101 80  4.00 LEC  4.00 E 0.50*   680.00* 11   29    61.82    23.45    15.45     5.86 INTRO BUS                    NO NO
OCC 140800 MKT       101 80  4.00 LEC  4.00 E 0.50*   680.00* 13   25    52.31    27.20    13.08     6.80 MARKETING                    NO NO
                             ------       -----   ---- --------  --- ---   ------------------------------------------------------------------
TOTALS FOR FALL      TERM--> 8.00         8.00    1.00  1360.00  24   54   TOTAL COURSES TAUGHT=   2      TOTAL STUDENT CREDIT HOURS=  96.00

BAC   11100 BUS      101 80  4.00 LEC  4.00 E 1.00*   680.00* 25   29    27.20    23.45     6.80     5.86 INTRO BUS                    NO NO
                             ------       -----   ---- --------  --- ---   ------------------------------------------------------------------
TOTALS FOR WINTER TERM--> 4.00            4.00    1.00   680.00  25   29   TOTAL COURSES TAUGHT=   1      TOTAL STUDENT CREDIT HOURS= 100.00

BAC   11100 BUS      101 80  4.00 LEC  4.00 E 1.00*   680.00* 24   29    28.33    23.45     7.08     5.86 INTRO BUS                    NO NO
                             ------       -----   ---- --------  --- ---   ------------------------------------------------------------------
TOTALS FOR SPRING TERM--> 4.00            4.00    1.00   680.00  24   29   TOTAL COURSES TAUGHT=   1      TOTAL STUDENT CREDIT HOURS=  96.00
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APPENDIX G

REPORT 2 COST DETAIL BY SECTION

Heading	Description
PRO	Identifies the major program to which a course is assigned. Identified under this heading are: BAC = Baccalaureate OCC = Occupational GEN = General Studies ADU = Adult and Continuing Education
DIS CODE	Identifies the discipline code or U.S.O.E. Occupational Code assigned to a course by each college. For those courses designated by an OCC the U.S.O.E. Occupational Code has been assigned. All other program codes have been assigned the Illinois Junior College Board Discipline Code.
COURSE ABBR NO SEC	Identifies the course abbreviation, number, and section as assigned by each college.
TYP	Identifies the nature of instruction assigned to each course for the purposes of this study: LAB = Laboratory LEC = Lecture L&L = Lecture and Laboratory IND = Independent Study PRC = Practicum DIS = Discussion
T	Identifies the time offered: D = day E = evening
DIRECT SALARY	Identifies the direct salary assigned to each section. Totals have also been provided for each course.
INDIRECT SALARY	Identifies the indirect salaries of administration, counseling, or other as identified by each institution and assigned to each section on a student credit hour basis.
SUPPLIES	Identifies the amount of supply monies which were assigned to each section on a student credit hour basis.
OTHER	Identifies the amount of monies for contractual services, rentals, travel, services, or maintenance of equipment which were assigned to each section on a student credit hour basis.

COST DETAIL BY SECTION (Cont.)

Heading	Description
INST EXPENSE	Identifies the amount of operational institutional expenditures which were assigned to each section on a student credit hour basis.
COST PER COURSE	Indicates the total cost for each section.
COST PER CRE HR	Indicates total operational cost per credit hour for each section.
COST PER STUDENT MID MAX	Indicates the cost per mid-term student and the projected cost per student based upon maximum enrollment in the course.
COST STU CRE HR MID MAX	Indicates the cost per student credit hour based upon mid-term enrollment and projected for the maximum enrollment in each section. In addition, the following totals were provided on a course basis: the total number of student credit hours generated in each course, the average cost per student credit hour based upon all sections, and the average cost per section, incorrectly designated on the printout as average cost per course.

A similar report was compiled on a discipline code basis. However, a sample of this report is not available but has been included in the information submitted to the State Division of Vocational and Technical Education.

```
                                                     COST DETAIL BY SECTION
                                                                                                                       PAGE  20E
PRO   DIS          COURSE     TYP T    DIRECT  INDIRECT  SUPPLIES    OTHER      INST    COST PER  COST PER  COST PER STUDENT     COST STU CRE HR
      CODE    ABBR  NO SEC             SALARY   SALARY                        EXPENSE    COURSE    CRE HR      MID       MAX       MID       MAX
                                      ======== ======== ======== ======== ======== =========  ==============================================
                                      6314.88      0.0    325.16      0.0   2023.68   8663.72  TOTAL STUDENT CREDIT HOURS FOR YEAR=    152.00
                                                                                               COST PER STUDENT CREDIT HOUR=      57.00
                                                                                               AVERAGE COST PER COURSE=  2887.91

BAC    7300 COM    101 01 LEC D        970.00      0.0      7.08      0.0   1171.60   2148.68    537.17     97.67     76.74     24.42     19.18
BAC    7300 COM    101 01 LEC D        600.00      0.0      5.47      0.0    905.33   1510.80    377.70     88.87     53.96     22.22     13.49
                                      -------- -------- -------- -------- -------- ---------  ----------------------------------------------
                                      1570.00      0.0     12.55      0.0   2076.93   3659.48  TOTAL STUDENT CREDIT HOURS=    156.00
                                                                                               COST PER STUDENT CREDIT HOUR=      23.46
                                                                                               AVERAGE COST PER COURSE=  1829.74

                                      ======== ======== ======== ======== ======== =========  ==============================================
                                      1570.00      0.0     12.55      0.0   2076.93   3659.48  TOTAL STUDENT CREDIT HOURS FOR YEAR=    156.00
                                                                                               COST PER STUDENT CREDIT HOUR=      23.46
                                                                                               AVERAGE COST PER COURSE=  1829.74

OCC 140200 DAP     101 02 L&L D        996.21      0.0     75.21      0.0   1278.11   2349.53    587.38     97.90     71.20     24.47     17.80
OCC 140200 DAP     101 80 L&L E        730.00      0.0     97.15      0.0   1650.90   2478.04    619.51     79.94     75.09     19.98     18.77
OCC 140200 DAP     101 81 L&L E       1794.69      0.0     31.34      0.0    532.55   2358.58    589.64    235.86     71.47     58.96     17.87
OCC 140200 DAP     101 81 L&L E        730.00      0.0     78.34      0.0   1331.37   2139.71    534.93     85.59     64.84     21.40     16.21
OCC 140200 DAP     101 80 L&L E        510.00      0.0     87.75      0.0   1491.13   2088.88    522.22     74.60     63.30     18.65     15.82
OCC 140200 DAP     101 80 L&L E        730.00      0.0     78.34      0.0   1331.37   2139.71    534.93     85.59     64.84     21.40     16.21
OCC 140200 DAP     101 81 L&L E        730.00      0.0     87.75      0.0   1491.13   2308.88    577.22     82.46     69.97     20.61     17.49
OCC 140200 DAP     101 83 L&L E        730.00      0.0     40.74      0.0    692.31   1463.05    365.76    112.54     44.33     28.14     11.08
OCC 140200 DAP     101 03 L&L D       1166.55      0.0     81.48      0.0   1384.62   2632.65    658.16    101.26     79.78     25.31     19.94
OCC 140200 DAP     101 01 L&L D       1166.55      0.0     78.34      0.0   1331.37   2576.26    644.06    103.05     78.07     25.76     19.52
OCC 140200 DAP     101 82 L&L E        730.00      0.0     84.61      0.0   1437.88   2252.49    563.12     83.43     68.26     20.86     17.06
OCC 140200 DAP     101 81 L&L E        730.00      0.0     47.01      0.0    798.82   1575.83    393.96    105.06     47.75     26.26     11.94
OCC 140200 DAP     101 80 L&L E       1333.00      0.0     59.54      0.0   1011.84   2404.38    601.09    126.55     72.86     31.64     18.21
                                      -------- -------- -------- -------- -------- ---------  ----------------------------------------------
                                     12077.00      0.0    927.60      0.0  15763.39  28767.99  TOTAL STUDENT CREDIT HOURS=   1184.00
                                                                                               COST PER STUDENT CREDIT HOUR=      24.30
                                                                                               AVERAGE COST PER COURSE=  2212.92

OCC 140200 DAP     102 01 L&L D       1155.48      0.0     84.61      0.0   1437.88   2677.97    669.49     99.18     81.15     24.80     20.29
OCC 140200 DAP     102 81 L&L E        730.00      0.0     56.41      0.0    958.58   1744.99    436.25     96.94     52.88     24.24     13.22
OCC 140200 DAP     102 80 L&L E        730.00      0.0    106.55      0.0   1810.66   2647.21    661.80     77.86     80.22     19.46     20.05
OCC 140200 DAP     102 80 L&L E        730.00      0.0     72.08      0.0   1224.86   2026.94    506.73     88.13     61.42     22.03     15.36
OCC 140200 DAP     102 80 L&L E        730.00      0.0     62.68      0.0   1065.09   1857.77    464.44     92.89     56.30     23.22     14.07
OCC 140200 DAP     102 02 L&L D        730.00      0.0     40.74      0.0    692.31   1463.05    365.76    112.54     44.33     28.14     11.08
                                      -------- -------- -------- -------- -------- ---------  ----------------------------------------------
                                      4805.48      0.0    423.07      0.0   7189.38  12417.93  TOTAL STUDENT CREDIT HOURS=    540.00
                                                                                               COST PER STUDENT CREDIT HOUR=      23.00
                                                                                               AVERAGE COST PER COURSE=  2069.66
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APPENDIX G

REPORT 4 COST ENROLLMENT DETAIL BY SECTION

REPORT 5 COST ENROLLMENT DETAIL BY DISCIPLINE OR OCCUPATIONAL CODE

Heading	Description
PRO	Identifies the major program to which a course is assigned. Identified under this heading are: BAC = Baccalaureate OCC = Occupational GEN = General Studies ADU = Adult and Continuing Education
DIS CODE	Identifies the discipline code or U.S.O.E. Occupational Code assigned to a course by each college. For those courses designated by an OCC the U.S.O.E. Occupational Code has been assigned. All other program codes have been assigned the Illinois Junior College Board Discipline Code.
COURSE ABBR NO SEC	Identifies the course abbreviation, number, and section as assigned by each college.
TYP	Identifies the nature of instruction assigned to each course for the purposes of this study: LAB = Laboratory LEC = Lecture L&L = Lecture and Laboratory IND = Independent Study PRC = Practicum DIS = Discussion
T	Identifies the time offered: D = day E = evening
COURSE NAME	Identifies the abbreviated course titles as provided in the Illinois Junior College Board Reapportionment System. ****'s identify those courses reassigned on the basis of fiscal 1969-70 data.
ENROLLMENT MID MAX	Identifies the actual mid-term enrollment as supplied by each institution and the projected maximum enrollment as supplied by each institution on a section basis.
COST PER COURSE	Indicates the total cost for each section.
COST PER CRE HR	Indicates total operational cost per credit hour for each section.

Heading	Description
COST PER STUDENT MID MAX	Indicates the cost per mid-term student and the projected cost per student based upon maximum enrollment in the course.
COST STU CRE HR MID MAX	Indicates the cost per student credit hour based upon mid-term enrollment and projected for the maximum enrollment in each section.

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                                              COST ENROLLMENT DETAIL BY SECTION
                                                                                                           PAGE  20E
PRO  DIS        COURSE    TYP T        COURSE NAME              ENROLLMENT COST PER  COST PER  COST PER STUDENT  COST STU CRE HR
     CODE   ABBR  NO SEC                                        MID   MAX   COURSE    CRE HR     MID      MAX      MID      MAX
                                                                ====  ====  =========  ==============================================
                                                                 38    60    8663.72  TOTAL STUDENT CREDIT HOURS=    152.00
                                                                                      COST PER STUDENT CREDIT HOUR=     57.00
                                                                                      AVERAGE COST PER COURSE=  2887.91


BAC   7300 COM     101 01 LEC D INTR MASS MEDIA                  22    28    2148.68   537.17    97.67    76.74    24.42    19.18
BAC   7300 COM     101 01 LEC D INTR MASS MEDIA                  17    28    1510.80   377.70    88.87    53.96    22.22    13.49
                                                                ----  ----  ---------  ----------------------------------------------
                                                                 39    56    3659.48  TOTAL STUDENT CREDIT HOURS=    156.00
                                                                                      COST PER STUDENT CREDIT HOUR=     23.46
                                                                                      AVERAGE COST PER COURSE=  1829.74


                                                                ====  ====  =========  ==============================================
                                                                 39    56    3659.48  TOTAL STUDENT CREDIT HOURS=    156.00
                                                                                      COST PER STUDENT CREDIT HOUR=     23.46
                                                                                      AVERAGE COST PER COURSE=  1829.74


OCC 140200 DAP     101 02 L&L D COMP PROG I                      24    33    2349.53   587.38    97.90    71.20    24.47    17.80
OCC 140200 DAP     101 80 L&L E COMP PROG I                      31    33    2478.04   619.51    79.94    75.09    19.98    18.77
OCC 140200 DAP     101 81 L&L E COMP PROG I                      10    33    2358.58   589.64   235.86    71.47    58.96    17.87
OCC 140200 DAP     101 81 L&L E COMP PROG I                      25    33    2139.71   534.93    85.59    64.84    21.40    16.21
OCC 140200 DAP     101 80 L&L E COMP PROG I                      28    33    2088.88   522.22    74.60    63.30    18.65    15.82
OCC 140200 DAP     101 80 L&L E COMP PROG I                      25    33    2139.71   534.93    85.59    64.84    21.40    16.21
OCC 140200 DAP     101 81 L&L E COMP PROG I                      28    33    2308.88   577.22    82.46    69.97    20.61    17.49
OCC 140200 DAP     101 83 L&L E COMP PROG I                      13    33    1463.05   365.76   112.54    44.33    28.14    11.08
OCC 140200 DAP     101 03 L&L D COMP PROG I                      26    33    2632.65   658.16   101.26    79.78    25.31    19.94
OCC 140200 DAP     101 01 L&L D COMP PROG I                      25    33    2576.26   644.06   103.05    78.07    25.76    19.52
OCC 140200 DAP     101 82 L&L E COMP PROG I                      27    33    2252.49   563.12    83.43    68.26    20.86    17.06
OCC 140200 DAP     101 81 L&L E COMP PROG I                      15    33    1575.83   393.96   105.06    47.75    26.26    11.94
OCC 140200 DAP     101 80 L&L E COMP PROG I                      19    33    2404.38   601.09   126.55    72.86    31.64    18.21
                                                                ----  ----  ---------  ----------------------------------------------
                                                                296   429   28767.99  TOTAL STUDENT CREDIT HOURS=   1184.00
                                                                                      COST PER STUDENT CREDIT HOUR=     24.30
                                                                                      AVERAGE COST PER COURSE=  2212.92


OCC 140200 DAP     102 01 L&L D COMP PROG II                     27    33    2677.97   669.49    99.18    81.15    24.80    20.29
OCC 140200 DAP     102 81 L&L E COMP PROG II                     18    33    1744.99   436.25    96.94    52.88    24.24    13.22
OCC 140200 DAP     102 80 L&L E COMP PROG II                     34    33    2647.21   661.80    77.86    80.22    19.46    20.05
OCC 140200 DAP     102 80 L&L E COMP PROG II                     23    33    2026.94   506.73    88.13    61.42    22.03    15.36
OCC 140200 DAP     102 80 L&L E COMP PROG II                     20    33    1857.77   464.44    92.89    56.30    23.22    14.07
OCC 140200 DAP     102 02 L&L D COMP PROG II                     13    33    1463.05   365.76   112.54    44.33    28.14    11.08
                                                                ----  ----  ---------  ----------------------------------------------
                                                                135   198   12417.93  TOTAL STUDENT CREDIT HOURS=    540.00
                                                                                      COST PER STUDENT CREDIT HOUR=     23.00
                                                                                      AVERAGE COST PER COURSE=  2069.66
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COST ENROLLMENT DETAIL BY DISCIPLINE OR OCCUPATIONAL CODE

PRO	DIS CODE	COURSE ABBR	COURSE NO	SEC	TYP	T	COURSE NAME	ENROLLMENT MID	ENROLLMENT MAX	COST PER COURSE	COST PER CRE HR	COST PER STUDENT MID	COST PER STUDENT MAX	COST STU CRE HR MID	COST STU CRE HR MAX
OCC	79900	BIO	108	04	L&L	D	**** HUMAN ANATOMY AND PHYSIOLOGY I	20	20	2325.52	581.38	116.28	116.28	29.07	29.07
OCC	79900	BIO	108	02	L&L	D	**** HUMAN ANATOMY AND PHYSIOLOGY I	15	20	1964.97	491.24	131.00	98.25	32.75	24.56
OCC	79900	BIO	108	80	L&L	E	**** HUMAN ANATOMY AND PHYSIOLOGY I	19	20	1918.95	479.74	101.00	95.95	25.25	23.99
OCC	79900	BIO	108	03	L&L	D	**** HUMAN ANATOMY AND PHYSIOLOGY I	17	20	2090.12	522.53	122.95	104.51	30.74	26.13
OCC	79900	BIO	108	01	L&L	D	**** HUMAN ANATOMY AND PHYSIOLOGY I	10	20	1652.09	413.02	165.21	82.60	41.30	20.65
OCC	79900	BIO	109	01	L&L	D	**** HUMAN ANATOMY AND PHYSIOLOG II	15	20	2012.64	503.16	134.18	100.63	33.54	25.16
OCC	79900	BIO	109	02	L&L	D	**** HUMAN ANATOMY AND PHYSIOLOG II	19	20	2262.95	565.74	119.10	113.15	29.78	28.29
OCC	79900	BIO	109	03	L&L	D	**** HUMAN ANATOMY AND PHYSIOLOG II	12	20	1824.92	456.23	152.08	91.25	38.02	22.81
OCC	79900	BIO	110	01	L&L	D	**** MICROBIOLOGY	20	20	2325.52	581.38	116.28	116.28	29.07	29.07
OCC	79900	BIO	110	02	L&L	D	**** MICROBIOLOGY	18	20	2200.36	550.09	122.24	110.02	30.56	27.50
OCC	79900	BIO	111	01	L&L	D	**** HISTOLOGY AND PATHOLOGY	10	20	1699.76	424.94	169.98	84.99	42.49	21.25
								266	340	33568.89	TOTAL STUDENT CREDIT HOURS= 1064.00 COST PER STUDENT CREDIT HOUR= 31.55 AVERAGE COST PER COURSE= 1974.64				
OCC	90102	TCH	101	01	L&L	D	ELEMENTARY EDUC	19	30	4246.53	1061.63	223.50	141.55	55.88	35.39
OCC	90102	TCH	102	01	L&L	D	TEACHER AIDE I	16	30	1702.64	425.66	106.41	56.75	26.60	14.19
OCC	90102	TCH	103	01	L&L	D	TEACHER AIDE II	7	30	1180.88	295.22	168.70	39.36	42.17	9.84
OCC	90102	TCH	103	01	L&L	D	TEACHER AIDE II	17	30	1676.82	419.20	98.64	55.89	24.66	13.97
OCC	90102	TCH	104	01	L&L	D	PRACTICUM	16	30	1906.08	476.52	119.13	63.54	29.78	15.88
OCC	90102	TCH	105	01	LAB	D	INTERNSHIP	17	30	2043.02	510.75	120.18	68.10	30.04	17.03
OCC	90102	TCH	105	01	LAB	D	INTERNSHIP	14	30	1569.76	392.44	112.13	52.33	28.03	13.08
								106	210	14325.73	TOTAL STUDENT CREDIT HOURS= 424.00 COST PER STUDENT CREDIT HOUR= 33.79 AVERAGE COST PER COURSE= 2046.53				
OCC	140200	DAP	101	02	L&L	D	COMP PROG I	24	33	2349.53	587.38	97.90	71.20	24.47	17.80
OCC	140200	DAP	101	80	L&L	E	COMP PROG I	31	33	2478.04	619.51	79.94	75.09	19.98	18.77
OCC	140200	DAP	101	81	L&L	E	COMP PROG I	10	33	2358.58	589.64	235.86	71.47	58.96	17.87
OCC	140200	DAP	101	81	L&L	E	COMP PROG I	25	33	2139.71	534.93	85.59	64.84	21.40	16.21
OCC	140200	DAP	101	80	L&L	E	COMP PROG I	28	33	2088.88	522.22	74.60	63.30	18.65	15.82
OCC	140200	DAP	101	80	L&L	E	COMP PROG I	25	33	2139.71	534.93	85.59	64.84	21.40	16.21
OCC	140200	DAP	101	81	L&L	E	COMP PROG I	28	33	2308.88	577.22	82.46	69.97	20.61	17.49
OCC	140200	DAP	101	83	L&L	E	COMP PROG I	13	33	1463.05	365.76	112.54	44.33	28.14	11.08
OCC	140200	DAP	101	03	L&L	D	COMP PROG I	26	33	2632.65	658.16	101.26	79.78	25.31	19.94
OCC	140200	DAP	101	01	L&L	D	COMP PROG I	25	33	2576.26	644.06	103.05	78.07	25.76	19.52
OCC	140200	DAP	101	82	L&L	E	COMP PROG I	27	33	2252.49	563.12	83.43	68.26	20.86	17.06
OCC	140200	DAP	101	81	L&L	E	COMP PROG I	15	33	1575.83	393.96	105.06	47.75	26.26	11.94
OCC	140200	DAP	101	80	L&L	E	COMP PROG I	19	33	2404.38	601.09	126.55	72.86	31.64	18.21
OCC	140200	DAP	102	01	L&L	D	COMP PROG II	27	33	2677.97	669.49	99.18	81.15	24.80	20.29
OCC	140200	DAP	102	81	L&L	E	COMP PROG II	18	33	1744.99	436.25	96.94	52.88	24.24	13.22
OCC	140200	DAP	102	80	L&L	E	COMP PROG II	34	33	2647.21	661.80	77.86	80.22	19.46	20.05
OCC	140200	DAP	102	80	L&L	E	COMP PROG II	23	33	2026.94	506.73	88.13	61.42	22.03	15.36
OCC	140200	DAP	102	80	L&L	E	COMP PROG II	20	33	1857.77	464.44	92.89	56.30	23.22	14.07
OCC	140200	DAP	102	02	L&L	D	COMP PROG II	13	33	1463.05	365.76	112.54	44.33	28.14	11.08
OCC	140200	DAP	103	80	L&L	E	COMP PROG III	18	33	1794.99	448.75	99.72	54.39	24.93	13.60

APPENDIX G

REPORT 6 COST AND REIMBURSEMENT DETAIL BY COURSE
REPORT 7 COST AND PROJECTED REVENUE DETAIL BY COURSE
REPORT 8 COST AND RESOURCE DETAIL BY DISCIPLINE OR OCCUPATIONAL CODE
REPORT 9 COST AND PROJECTED RESOURCE DETAIL BY DISCIPLINE OR OCCUPATIONAL CODE

Heading	Description
PRO	Identifies the major program to which a course is assigned. Identified under this heading are: BAC = Baccalaureate OCC = Occupational GEN = General Studies ADU = Adult and Continuing Education
DIS CODE	Identifies the discipline code or U.S.O.E. Occupational Code assigned to a course by each college. For those courses designated by an OCC the U.S.O.E. Occupational Code has been assigned. All other program codes have been assigned the Illinois Junior College Board Discipline Code.
COURSE ABBR NO SEC	Identifies the course abbreviation, number, and section as assigned by each college.
TYP	Identifies the nature of instruction assigned to each course for the purposes of this study: LAB = Laboratory LEC = Lecture L&L = Lecture and Laboratory IND = Independent Study PRC = Practicum DIS = Discussion
T	Identifies the time offered: D = day E = evening
LVL	Identifies the level of course offering, either Freshman or Sophomore.
COST	Identifies the total operating cost for each section.
JR COLL REIM	Identifies the junior college reimbursement for each section computed on a basis of $15.50 for each student credit hour.
VOC EN	Identifies the enrollment in each course as identified from reimbursement claims submitted to Division of Vocational and Technical Education.

REPORTS 6 - 9 (Cont.)

Heading	Description
VOCATION REIM	Identifies the amount of reimbursement received from the Division of Vocational and Technical Education. The number of identified students has been multiplied by the credit hours of each section and in turn by the reimbursement rate assigned to each college.
TUITION	Identifies the amount of tuition received on a section basis. The number of mid-term students has been multiplied by the section credit and in turn by the amount of tuition charged by each institution for each student credit hour.
MID EN	In reports 6 and 8, identifies the number of mid-term students enrolled in each section as provided by each college.
CR HRS	Identifies the credit hours assigned to each section by each institution.
STU CRDT HR REVEN	Identifies the total amount of resources received from the Illinois Junior College Board, the Division of Vocational and Technical Education, and tuition on a course basis.
COST LOCAL	Identifies the cost to the local district for offering a given course. It has been obtained by subtracting the amount under the STU CRDT HR REVEN heading from the amount identified under the COST heading.
TOT COST ST CR HR	Based on all operational expenditures, identifies the cost per student credit hour.
TOT REV ST CR HR	Identifies the total amount received from the Illinois Junior College Board, the Division of Vocational and Technical Education, and tuition by the local district for each student credit hour
LOCAL COST STUD CR HR	Identifies the cost to the local district for each student credit hour. It has been obtained by subtracting the total amount of student credit hour revenue from the total cost and dividing the remainder by the amount of student credit hours in a given course.

*The following headings beginning vertically with MINIMUM ENROLLMENT, proceeding through NUMBER OF COURSES and beginning with SEC and proceeding horizontally to LECT-LAB form a separate table further describing the above data according to the (1) section, (2) Freshman - Sophomore, (3) Day and Evening, and (4) nature of instruction classifications. Such data have been aggregated according to course abbreviation for reports 6 and 7, and discipline for reports 8 and 9.

REPORTS 6 - 9 (Cont.)

Heading	Description
MINIMUM ENROLLMENT	Identifies the lowest enrollment in a given section. For reports 6 and 7 the minimum enrollment figure indicates the lowest enrollment in a given course abbreviation. In reports 8 and 9 the minimum enrollment figure indicates the lowest enrollment in a given discipline. The minimum enrollment figure is based upon actual mid-term data.
MAXIMUM ENROLLMENT	Indicates the largest number of students enrolled in a given section. For reports 6 and 7, the maximum enrollment figure indicates the largest enrollment in a given course abbreviation. For reports 8 and 9, the maximum enrollment figure indicates the largest enrollment in a given discipline. The maximum enrollment figure has been based upon mid-term data.
MEAN ENROLLMENT	Identifies the average enrollment based upon mid-term data for either a course abbreviation or discipline.
COST	Identifies the total operational expenditures for all sections comprising a given course abbreviation (reports 6 and 7) or discipline (reports 8 and 9).
STUDENT CRED HOURS	Identifies the student credit hours obtained on a section basis. For reports 6 and 7, totals are provided for each courses abbreviation. For reports 8 and 9, totals are provided for each discipline or Occupational code.
COST PER STU CR HR	Based on all operational expenditures, identifies the cost per student credit hour.
CREDIT HOURS	Identifies the credit hours assigned to each section by each college.
CONTACT HOURS	Identifies the total amount of actual instructional time including laboratory hours, lecture hours, and discussion hours on a weekly basis. For reports 6 and 7, the figure identifies the total amount of contact hours generated by a given course abbreviation. For reports 8 and 9, the figure indicates the total amount of contact hours generated by a given discipline.
NUMBER OF STUDENTS	Identifies the number of students enrolled in all sections of a given course abbreviation (reports 6 and 7) or discipline (reports 8 and 9).

Heading	Description
NUMBER OF COURSES	Identifies the number of sections taught within a given course abbreviation (reports 6 and 7) or discipline (reports 8 and 9).

* The following headings displayed horizontally on the sample computer printout are to be used in conjunction with the vertical headings beginning with MINIMUM ENROLLMENT and going through NUMBER OF COURSES:

SEC	Indicates data compiled on a section basis.
FRESHMAN and SOPH	Identify data compiled on a section basis for all freshman and sophomore courses. Three of the five participating institutions were able to identify courses within the freshman--sophomore classification.
DAY and EVENING	Identify data compiled on a section basis for all day and evening sections.
LAB	Indicates data compiled on a section basis for all laboratory sections.
LECT	Identifies data compiled on a section basis for all lecture sections.
PRACT	Identifies data compiled on a section basis for all practicum sections.
IND STDY	Identifies all data compiled on a section basis for independent study sections.
DISCUSS	Identifies all data compiled on a section basis for discussion sections.
LECT-LAB	Identifies all data compiled on a section basis for sections requiring both the lecture and laboratory methods of instruction.

* The remaining headings on this report respectively identify the amount of money spent for counseling, administration, and other indirect salaries and the amount of money, credit hours, and student credit hours which have been taught through part-time, full-time and overload instruction.

Reports 6 through 9 present basically the same type of data. They differ, however, in methods of aggregation and the enrollment figures used. Report 6 is based upon actual enrollment as submitted to the Illinois Junior College Board and the State Division of Vocational and Technical Education while report 7 is based upon maximum enrollments as obtained from each of the participating institutions. Both reports (6 and 7) are aggregated according to course abbreviation. Report 8 is based upon mid-term enrollment as submitted to the

Heading Description

Illinois Junior College Board and the State Division of Vocational and Technical Education while report 9 is based upon projected maximum enrollment as obtained from each of the participating institutions. Both reports (8 and 9) are aggregated according to discipline or, in the case of Occupational programs, the U.S.O.E. Occupational Code.

While the data compiled on the basis of mid-term enrollments is self-explanatory, the reports generated on the basis of maximum enrollment and projected levels of reimbursement and tuition are in need of further explanation. Since costs are assumed to be relatively stable within the designed interval of enrollment, the costs used in the projected reports (7 and 9) are the same as those computed on the basis of mid-term enrollment. The amount of resources available from the Illinois Junior College Board and from tuition, however, were projected on the basis of student credit hours generated by the maximum number of students which could be accomodated in a given section. Since the amount of monies available for vocational education have remained relatively stable during the last year, no attempt was made to project vocational reimbursement on a student credit hour basis. The monies received from the Division of Vocational and Technical Education, and the projected monies available from the Illinois Junior College Board and tuition payments were then subtracted from costs as initially determined based upon mid-term enrollment. The remainder, thus identified, was divided by the total amount of student credit hours on a course basis to obtain the cost to the local district for each student credit hour.

COST AND REIMBURSEMENT DETAIL BY COURSE

PRO	DIS CODE	COURSE ABBR	NO	SEC	TYP	T LVL	COST	JR COLL REIM	VOC EN	VOCATION REIM	TUITION	MID EN	CR HRS	STU CRDT HR REVEN	COST LOCAL	*TOT COST *ST CR HR	*TOT REV *ST CR HR	*LOCAL COST *STUD CR HR
OCC	140700	SEC	199				3216.59	1074.32	14	616.00	572.00	13	8.00	2262.32	954.27	30.93	21.75	9.18
OCC	140700	SEC	201	01	L&L	D	4896.41	991.68			528.00	12	8.00					
OCC	140700	SEC	201	01	L&L	D	4929.14	1652.80			880.00	20	8.00					
OCC	140700	SEC	201				9825.55	2644.48	32	1408.00	1408.00	32	16.00	5460.48	4365.07	38.38	21.33	17.05
OCC	140700	SEC	202	01	L&L	D	4814.88	1570.16			836.00	19	8.00					
OCC	140700	SEC	202				4814.88	1570.16	19	836.00	836.00	19	8.00	3242.16	1572.72	31.68	21.33	10.35
OCC	140700	SEC	203	01	L&L	D	6026.68	2355.24			1254.00	19	12.00					
OCC	140700	SEC	203				6026.68	2355.24	20	1320.00	1254.00	19	12.00	4929.24	1097.44	26.43	21.62	4.81
		SEC					70424.38	22808.64	449	12188.00	12144.00	450	*****	47140.64	23283.74	31.90	21.35	10.55

	SEC	FRESHMAN	SOPH	DAY	EVENING	LAB	LECT	PRACT	IND STDY	DISCUSS	LECT-LAB
MINIMUM ENROLLMENT	2	0	0	2	7	0	0	0	0	0	2
MAXIMUM ENROLLMENT	22	0	0	20	22	0	0	0	0	0	22
MEAN ENROLLMENT	13	0	0	13	14	0	0	0	0	0	13
COST	70424.38	0.0	0.0	55264.16	15160.22	0.0	0.0	0.0	0.0	0.0	70424.38
STUDENT CRED HOURS	2208.00	0.0	0.0	1640.00	568.00	0.0	0.0	0.0	0.0	0.0	2208.00
COST PER STU CR HR	31.90	0.0	0.0	33.70	26.69	0.0	0.0	0.0	0.0	0.0	31.90
CREDIT HOURS	160.00	0.0	0.0	120.00	40.00	0.0	0.0	0.0	0.0	0.0	160.00
CONTACT HOURS	203.00	0.0	0.0	153.00	50.00	0.0	0.0	0.0	0.0	0.0	203.00
NUMBER OF STUDENTS	450	0	0	308	142	0	0	0	0	0	450
NUMBER OF COURSES	34	0	0	24	10	0	0	0	0	0	34

	DOLLARS
COUNSELING	0.0
ADMINISTRATION	0.0
OTHER	0.0

	DOLLARS	CR HRS	ST CR HR
PART TIME	8770.00	44.00	448.00
FULL TIME	30119.52	116.00	1760.00
OVER LOAD	2115.00	12.00	216.00

```
                                        COST AND PROJECTED REVENUE DETAIL BY COURSE
                                                                                                                PAGE  89E
PRO   DIS       COURSE    TYP T LVL      COST    JR COLL VOC VOCATION  TUITION MAX   CR  STU CRDT    COST *TOT COST*TOT  REV*LOCAL COST
     CODE   ABBR  NO SEC                          REIM    EN    REIM            EN   HRS  HR REVEN   LOCAL *ST CR HR*ST CR HR*STUD CR HR
-----------------------------------------------------------------------------------------------------------------------------------------
OCC 140700 SEC    109                  3216.59  2066.00  14   616.00  1100.00  25  8.00  3782.00  -565.41     16.08     18.91       -2.83

OCC 140700 SEC    201 01 L&L D         4896.41  2066.00               1100.00  25  8.00
OCC 140700 SEC    201 01 L&L D         4929.14  2066.00               1100.00  25  8.00
-----------------------------------------------------------------------------------------------------------------------------------------
OCC 140700 SEC    201                  9825.55  4132.00  32  1408.00  2200.00  50 16.00  7740.00  2085.55     24.56     19.35        5.21

OCC 140700 SEC    202 01 L&L D         4814.88  2066.00               1100.00  25  8.00
-----------------------------------------------------------------------------------------------------------------------------------------
OCC 140700 SEC    202                  4814.88  2066.00  19   836.00  1100.00  25  8.00  4002.00   812.88     24.07     20.01        4.06

OCC 140700 SEC    203 01 L&L D         6026.68  3099.00               1650.00  25 12.00
-----------------------------------------------------------------------------------------------------------------------------------------
OCC 140700 SEC    203                  6026.68  3099.00  20  1320.00  1650.00  25 12.00  6069.00   -42.32     20.09     20.23       -0.14

=========================================================================================================================================
           SEC                        70424.38 41320.00 449 12188.00 22000.00 850 ***** 75508.00 -5083.62     17.61     18.88       -1.27

                           SEC      FRESHMAN    SOPH       DAY   EVENING       LAB        LECT      PRACT   IND STDY  DISCUSS LECT-LAB
MINIMUM ENROLLMENT          25          0         0         25       25          0          0          0          0         0      25
MAXIMUM ENROLLMENT          25          0         0         25       25          0          0          0          0         0      25
MEAN ENROLLMENT             25          0         0         25       25          0          0          0          0         0      25
COST                  70424.38        0.0       0.0   55264.16 15160.22        0.0        0.0        0.0        0.0       0.0 70424.38
STUDENT CRED HOURS     4000.00        0.0       0.0    3000.00  1000.00        0.0        0.0        0.0        0.0       0.0  4000.00
COST PER STU CR HR       17.61        0.0       0.0      18.42    15.16        0.0        0.0        0.0        0.0       0.0    17.61
CREDIT HOURS            160.00        0.0       0.0     120.00    40.00        0.0        0.0        0.0        0.0       0.0   160.00
CONTACT HOURS           203.00        0.0       0.0     153.00    50.00        0.0        0.0        0.0        0.0       0.0   203.00
NUMBER OF STUDENTS      850           0         0       600      250           0          0          0          0         0     850
NUMBER OF COURSES        34           0         0        24       10           0          0          0          0         0      34

                       DOLLARS                            DOLLARS    CR HRS    ST CR HR
COUNSELING               0.0              PART TIME       8770.00     44.00     1100.00
ADMINISTRATION           0.0              FULL TIME      30119.52    116.00     2900.00
OTHER                    0.0              OVER LOAD       2115.00     12.00      300.00
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COST AND RESOURCE DETAIL BY DISCIPLINE OR OCCUPATIONAL CODE

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                                                                                                          PAGE  59E
PRO  DIS       COURSE      TYP T LVL     COST    JR COLL VOC VOCATION  TUITION MID   CR  STU CRDT      COST *TOT COST*TOT  REV*LOCAL COST
     CODE  ABBR  NO SEC                          REIM    EN    REIM             EN   HRS  HR REVEN     LOCAL *ST CR HR*ST CR HR*STUD CR HR
OCC  10301 FET   101 01 L&L D  1   2106.26   371.88                   198.00    9  4.00
OCC  10301 FET   102 01 L&L D  1    588.45   206.60                   110.00    5  4.00
OCC  10301 FET   103 01 L&L D  1   1345.37   206.60                   110.00    5  4.00
OCC  10301 FET   104 01 L&L D  1   1406.01    82.64                    44.00    1  8.00
OCC  10301 FET   201 01 L&L D  2   2326.94   330.56                   176.00    8  4.00
OCC  10301 FET   202 80 L&L E  2   1143.97   289.24                   154.00    7  4.00
OCC  10301 FET   202 01 L&L D  2   1818.49   537.16                   286.00   13  4.00
OCC  10301 FET   203 01 L&L D  2   1641.07   413.20                   220.00   10  4.00
OCC  10301 FET   210 01 LEC D  2    560.34   289.24                   154.00    7  4.00
OCC  10301 FET   211 01 LAB D  2   2559.30   867.72                   462.00    7 12.00
==========================================================================================================================================
     10301                        15496.20            70             1914.00       52.00             8161.36             21.08
                                            3594.84        1826.00             72        7334.84                 44.53              23.45


                     10301     FRESHMAN  SOPHOMORE        DAY     EVENING LABORATORY    LECTURE  PRACTICUM   IND STUDY    DISCUCC  LECT-LAB
MIN ENROL              1           1          7             1         7         7           7         0           0            0          1
MAX ENROL             13           9         13            13         7         7           7         0           0            0         13
MEAN ENROL             7           5          9             7         7         7           7         0           0            0          7
COST               15496.20    5446.09   10050.11      14352.23   1143.97   2559.30      560.34       0.0         0.0          0.0   12376.56
ST CR HRS            348.00      84.00     264.00        320.00     28.00     84.00       28.00       0.0         0.0          0.0     236.00
COST/ST CR H          44.53      64.83      38.07         44.85     40.86     30.47       20.01       0.0         0.0          0.0      52.44
CRED HRS              52.00      20.00      32.00         48.00      4.00     12.00        4.00       0.0         0.0          0.0      36.00
CONT HRS             108.00      42.00      66.00        102.00      6.00     36.00        4.00       0.0         0.0          0.0      68.00
NO. OF STDS           72          20         52            65         7         7           7         0           0            0         58
NO. OF SECTS          10           4          6             9         1         1           1         0           0            0          8

                         DOLLARS                           DOLLARS   CR HRS   ST CR HR
COUNSELING                 0.0            PART TIME          0.0       0.0       0.0
ADMINISTRATION             0.0            FULL TIME      10351.03     52.00    348.00
OTHER                      0.0            OVER LOAD        730.00      4.00     28.00
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APPENDIX H

CARD FORMATS FOR THE PROPOSED SYSTEM

APPENDIX H

Student Information - Card I

Item	Card Columns	Description
1.	1-3	district number
2.	4	campus number
3.	5	quarter or semester hours of credit
4.	6-11	course (department) prefix
5.	12-15	course number
6.	16-17	section number
7.	18	general program identification (baccalaureate, occupational, general studies, etc.
8.	19-21	specific program identification (a specific program code to be developed for individual programs within the vocational and baccalaureate areas applicable on a state-wide basis)
9.	22	type of credit
10.	23-26	credit hour value
11.	27-30	lecture hours
12.	31-34	lab hours
13.	35	degree or certificate
14.	36	term of enrollment
15.	37-38	year of enrollment
16.	39	type of instruction (laboratory, non-laboratory, etc.)
17.	40	day or evening
18.	41	numerical code for in-state, out-of-state, in-district, out-of-district, reimbursable, non-reimbursable

Student Information - Card I (Cont.)

Item	Card Columns	Description
19.	42-52	student name (last)
20.	53-54	initials
21.	55-63	social security number
22.	64	full or part-time
23.	65	male or female
24.	66	numerical coding for disadvantaged, handicapped, etc.
25.	67	race
26.	68-72	fees to nearest dollar for this section other than normally assigned for purposes of tuition or activity
27.	73-77	fees for this section other than those normally assigned for purposes of tuition or activity paid by an agency
28.	78-79	numerical coding as to organization paying fees
29.	80	card code

Faculty and Section Information

A. Section Information for each Faculty Member - Card II

Item	Card Columns	Description
1.	1-3	district number
2.	4	campus number
3.	5	quarter or semester hours of credit
4.	6-11	course (department) prefix
5.	12-15	course number
6.	16-17	section
7.	18	type of credit
8.	19-22	credit hours
9.	23-26	contact hours
10.	27	nature of instruction
11.	28	shared instruction code
12.	29-31	percentage of load assigned to this activity
13.	32	term in which the course has been offered
14.	33-34	year
15.	35-40	the designed enrollment of this course (maximum, minimum, desired)
16.	41-55	teacher's name
17.	56-64	teacher's social security number
18.	65	special organization
19.	66	initial program
20.	67-72	days of class meeting

Faculty and Section Information (Cont.)

Item	Card Columns	Description
21.	73	building code
22.	74-76	room number
23.	77-79	hours room used for this section
23.	80	card code

B. Additional Faculty Information - Card III

Item	Card Columns	Description
1.	1-3	district number
2.	4	campus number
3.	6-11	discipline code to which the activity is assigned
4.	12-19	type of activity (abbreviated: admin, counsel, curr dev, other)
5.	20-28	blank
6.	29-31	percentage of load assigned to this activity
7.	32	term
8.	33-34	year
9.	35-40	blank
10.	41-55	teacher's name
11.	56-64	teacher's social security number
12.	65-79	blank
13.	80	card code

Salary Cards

A. Academic year salary - Card IV

Item	Card Columns	Description
1.	1-3	district number
2.	4	campus number
3.	5	part- or full-time
4.	6-16	blank
5.	17-32	blank
6.	33-34	year
7.	35-40	blank
8.	41-55	teacher's name
9.	56-64	teacher's social security number
10.	65-71	salary
11.	72-75	terms to which salary applies
12.	76-79	blank
13.	80	card code

B. Overload Salary - Term - Card V

Item	Card Columns	Description
1.	1-3	district number
2.	4	campus number
3.	5-32	blank
4.	33-34	year
5.	35-40	blank
6.	41-55	teacher's name
7.	56-64	teacher's social security number
8.	65-71	salary
9.	72	term to which overload salary applies
10.	73-79	blank
11.	80	card code

C. Overload Salary - Course Basis - Card VI

Item	Card Columns	Description
1.	1-3	district number
2.	4	campus number
3.	5	quarter or semester hours of credit
4.	6-11	course (department) prefix
5.	12-15	course number
6.	16-17	section
7.	18-31	blank
8.	32	term in which course has been offered
9.	33-34	year
10.	35-40	blank
11.	41-55	teacher's name
12.	56-64	teacher's social security number
13.	65-71	salary
14.	72-79	blank
15.	80	card code

Master Card Data - Card VIII

Item	Card Columns	Description
1.	1-3	district number
2.	4	campus number
3.	5	quarter or semester
4.	6-11	course (department) prefix
5.	12-15	course number
6.	16	program code
7.	17-22	discipline code or U.S.O.E. Code
8.	23-57	course name
9.	58-62	approval date
10.	63	reimbursement code - Junior College Board
11.	64	reimbursement code - Vocational Education Division
12.	65-67	curriculum within which the course is normally offered
13.	68	level of course offering
14.	69	classification according to accreditation requirement
15.	70-79	blank
16.	80	card code

Supplemental Expenditures - Card VII

Item	Card Columns	Description
1.	1-3	district number
2.	4	campus number
3.	5-10	code to which expenditures are to be assigned
4.	11-17	travel
5.	18-24	contractual
6.	25-31	supplies
7.	32-39	equipment
8.	40-46	other
9.	47-55	institutional expenditures
10,	56-79	blank
11.	80	card code

APPENDIX I

EXPENDITURE AND COST DETAIL BY DISCIPLINE AND OCCUPATIONAL CODES FOR EACH INSTITUTION

APPENDIX I

EXPENDITURE AND COST DETAIL BY DISCIPLINE AND OCCUPATIONAL CODES FOR EACH INSTITUTION

Heading	Description
College	A letter identifies the institutions participating in this study. T identifies the weighted total or average for all institutions.
Total or Average	T indicates the total amount of monies expended under each heading while A indicates an average cost per section in the headings of Direct Salary, Indirect Salary, Supplies, Other, Institutional Allocation, and Total Cost. For the remaining categories of Credit Hours, Contact Hours, Enrollment, and Student Credit Hours, A indicates the average cost per each of these units. T indicates the total amount of each above identified unit offered on a discipline or U.S.O.E. Code basis.
Direct Salary	Indicates salary identified specifically for teaching purposes.
Indirect Salary	Indicates salary identified for purposes of administration, counseling, and other.
Supplies	Indicates supply expenditures identified at departmental level and lower.
Other	Indicates total amount spent for other departmental expenditures such as contractual services, rental, travel, etc.
Institutional Allocation	Identifies institutional operational expenditures which are allocated equally on a student credit hour basis to all sections.
Total Cost	Indicates the total cost per section based on all operational expenditures.
Credit Hours	Identifies the total number of credit hours generated and the average cost per credit hour.
Contact Hours	Identifies the total number of contact hours generated and the cost per contact hour.

EXPENDITURE AND COST DETAIL BY DISCIPLINE AND OCCUPATIONAL CODES FOR EACH INSTITUTION (Cont.)

Heading	Description
Enrollment Mid-Term Maximum	T indicates the total number of students enrolled at mid-term and the maximum number of students which could be accomodated in all sections offered. A provides the average cost per mid-term student and the average cost per student projected or maximum enrollment.
Student Credit Hours Mid-Term Maximum	T identifies the total number of student credit hours generated based on mid-term enrollment and the projected maximum enrollment. A shows the cost per student credit hour based on mid-term enrollment and maximum enrollment.

Note: (1) All credit hours are shown in semester hours.

(2) Number of sections taught in each discipline is shown in Appendix K.

(3) Average enrollment in a section can be estimated by dividing the total number of students in a discipline (Appendix I) by the total number of sections in a discipline (Appendix K).

APPENDIX I

EXPENDITURE AND COST DETAIL BY DISCIPLINE AND OCCUPATIONAL CODES FOR EACH INSTITUTION

BACCALAUREATE

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment Mid-Term	Enrollment Maximum	Student Credit Hours Mid-Term	Student Credit Hours Maximum
1001000 - 1001080 AGRICULTURAL SCIENCES													
A	T	2836.30	271.81	237.69	200.33	6306.82	9852.95	13.99	17.33	91.00	135.00	254.64	379.96
	A	567.26	54.36	47.53	40.06	261.36	1970.59	704.28	568.54	108.27	72.98	38.69	25.93
B	T	2656.40	108.39	343.11	38.52	1688.05	4834.47	6.00	6.00	40.00	48.00	120.00	144.00
	A	1328.20	54.19	171.55	19.26	844.02	2417.23	805.74	805.74	120.86	100.71	40.28	33.57
C	T												
	A												
D	T	3890.00	800.60	39.78	4.12	719.70	5454.20	6.00	6.00	14.00	60.00	42.00	180.00
	A	1945.00	400.30	19.89	2.06	359.85	2727.10	909.03	909.03	389.58	90.90	129.86	30.30
E	T	4544.41		151.25		3160.27	7855.93	10.66	14.66	61.00	104.00	162.65	277.30
	A	1136.10		37.81		790.06	1963.98	736.95	554.79	128.78	75.53	48.29	28.33
T	T	13927.11	1180.80	771.83	242.97	11874.84	27997.55	36.65	43.99	206.00	347.00	579.29	981.26
	A	1022.85	90.83	59.37	18.69	913.44	2153.65	763.91	636.45	135.91	80.68	48.33	28.53
1002000 - 1002080 BIOLOGICAL SCIENCES													
A	T	56813.93		3453.03	141.48	72644.00	133052.44	151.98	226.64	1100.00	1368.00	2933.04	3647.63
	A	996.73		60.57	2.48	1274.45	2334.25	875.46	587.06	120.95	97.26	45.36	36.47
B	T	102269.92	3579.99	4176.82		67086.15	177112.88	143.00	281.00	1100.00	922.00	4769.00	3757.00
	A	905.04	31.68	36.96		593.68	1567.37	1238.55	630.29	161.01	192.09	37.13	47.14
C	T	60153.36	4449.59	7407.59	317.21	50977.11	123304.86	138.00	26.66	712.00	914.00	2878.00	3704.00
	A	1769.21	130.87	217.87	9.32	1499.32	3626.61	893.51	4625.08	173.18	134.90	42.84	33.28
D	T	74428.94	2488.69	1024.88	450.85	78823.30	157216.66	136.00	238.00	1150.00	816.00	4600.00	3264.00
	A	918.87	30.72	12.65	5.56	973.12	1940.94	1156.00	660.57	136.71	192.66	34.17	48.16

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment		Student Credit Hours	
										Mid-Term	Maximum	Mid-Term	Maximum
1002000 - 1002080 BIOLOGICAL SCIENCES (cont.)													
E	T	41943.32	3356.01	1752.11		28390.64	75442.08	101.32	151.98	548.00	760.00	1461.18	2026.46
	A	1103.77	88.31	46.10		747.12	1985.31	744.59	496.39	137.66	99.26	51.63	37.22
T	T	335609.47	13874.28	17814.43	909.54	297921.20	666128.92	670.30	924.28	4610.00	4780.00	16641.22	16399.09
	A	1039.03	42.95	55.15	2.81	922.35	2062.31	993.77	720.70	144.49	139.35	40.02	40.61
1003000 MATHEMATICAL SCIENCES													
A	T	33125.15	1134.69	993.17		62804.04	98057.05	114.65	114.65	951.00	1451.00	2535.74	3868.94
	A	770.35	26.38	23.09		1460.55	2280.39	855.27	855.27	103.10	67.57	38.66	25.34
B	T	78445.50	3541.84	326.24		55874.68	138188.26	212.00	240.00	1173.00	1847.00	3972.00	6321.00
	A	1265.25	57.12	5.26		901.20	2228.84	651.83	575.78	117.80	74.81	34.79	21.86
C	T	48888.78		425.97	6.98	50374.82	99696.55	132.00	132.00	909.00	1392.00	2844.00	4362.00
	A	1164.01		10.14	.16	1199.40	2373.72	755.27	755.27	109.67	71.62	35.05	22.85
D	T	98116.12	11000.58	894.14	509.38	93885.39	204405.61	273.00	273.00	1517.00	2280.00	5479.00	8190.00
	A	1291.00	144.74	11.76	6.70	1235.33	2689.54	748.73	748.73	134.74	89.65	37.30	24.95
E	T	48611.40	1140.13	30.61		54657.19	104439.33	173.31	173.31	1055.00	1950.00	2813.05	5199.48
	A	747.86	17.54	.47		840.87	1606.75	602.61	602.61	98.99	53.55	37.12	20.08
T	T	307186.95	16817.24	2670.13	516.36	317596.12	644786.80	904.96	932.96	5605.00	8920.00	17643.79	27941.42
	A	1066.62	58.39	9.27	1.79	1102.76	2238.84	712.50	691.11	115.03	72.28	36.54	23.07
1004000 - 1004060 PHYSICAL SCIENCES													
A	T	34725.98	1119.86	4000.08	237.42	34043.62	73753.44	92.65	137.31	507.00	780.00	1374.52	2127.78
	A	1021.35	32.93	117.64	6.98	1001.28	2169.21	796.04	537.13	145.47	94.55	53.65	34.66
B	T	110933.09	8969.99	6352.83		45014.83	171270.74	193.00	276.00	693.00	988.00	3200.00	4508.00
	A	1479.10	119.59	83.37		600.19	2283.60	887.41	620.54	247.14	173.35	53.52	37.99
C	T	44171.99		15412.12	256.70	44848.45	104689.26	121.00	132.88	592.00	832.00	2532.00	3577.00
	A	1577.57		550.43	9.16	1601.73	3738.90	865.20	787.84	176.83	125.82	41.34	29.26

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment Mid-Term	Enrollment Maximum	Student Credit Hours Mid-Term	Student Credit Hours Maximum
1004000 - 1004060 PHYSICAL SCIENCES (cont.)													
D	T	84533.88	339.01	10803.94	315.49	74059.64	170051.96	147.00	287.00	1058.00	824.00	4322.00	3364.00
	A	871.48	3.49	111.38	3.25	763.50	1753.11	1156.81	592.51	160.72	206.37	39.34	50.55
E	T	23014.70		4380.35		13780.89	41175.94	61.32	93.99	266.00	484.00	709.26	1290.53
	A	1000.63		190.45		599.16	1790.25	671.49	438.08	154.79	85.07	58.05	31.90
T	T	297379.64	10428.86	40949.32	809.61	211747.43	560941.34	164.97	927.18	3116.00	3908.00	12137.78	14867.31
	A	1157.11	40.57	159.33	3.15	823.91	2182.65	3400.26	604.99	180.01	143.53	46.21	37.72
1005000 - 1005075 ENGINEERING SCIENCES													
A	T	2307.02	122.24	234.29	16.27	1717.04	4396.86	5.33	10.66	26.00	40.00	69.32	106.65
	A	1153.51	61.12	117.14	8.13	858.52	2198.43	824.92	412.46	169.11	109.92	63.42	41.22
B	T	14060.47		163.72	11.32	5823.80	20059.31	27.00	41.00	107.00	201.00	414.00	774.00
	A	2008.63		23.38	1.61	831.97	2865.61	742.93	489.25	187.47	99.79	48.45	25.91
C	T	3820.22		1234.57	32.74	2922.59	8010.12	12.00	13.00	55.00	100.00	165.00	300.00
	A	955.05		308.64	8.18	730.64	2002.53	667.51	616.16	145.63	80.10	48.54	26.70
D	T	8849.26				4198.19	13047.45	15.00	19.00	123.00	238.00	245.00	454.00
	A	1264.18				599.74	1863.92	869.83	686.70	106.07	54.82	53.25	28.73
E	T	4429.00		1.10		1968.69	6398.79	7.99	15.99	38.00	75.00	101.32	199.98
	A	1476.33		.36		656.23	2132.93	800.84	400.17	168.38	85.31	63.15	31.99
T	T	33465.97	122.24	1633.68	60.33	16630.31	51912.53	67.32	99.65	349.00	654.00	994.64	1834.63
	A	1455.04	5.31	71.02	2.62	723.05	2257.06	771.13	520.94	148.74	79.37	52.19	28.29
1006000 - 1006040 SOCIAL SCIENCES													
A	T	84040.61	6672.99	2968.59	1096.85	200035.16	294814.65	327.96	327.96	3029.00	4217.00	8076.52	11244.20
	A	677.74	53.73	23.94	8.84	1613.18	2377.53	898.93	898.93	97.29	69.91	36.50	26.21
B	T	188782.62	6590.71	2284.29	2176.98	199260.87	399095.47	539.00	543.00	4227.00	5705.00	14165.00	18865.00
	A	1158.17	40.43	14.01	13.35	1222.45	2448.43	740.43	734.98	94.41	69.95	28.17	21.15

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment		Student Credit Hours	
										Mid-Term	Maximum	Mid-Term	Maximum
1006000 - 1006040 SOCIAL SCIENCES (cont.)													
C	T	89201.71	3300.00	1269.73	368.09	146876.48	241013.01	270.00	270.00	2611.00	3051.00	8292.00	9693.00
	A	1049.43	38.82	14.93	4.33	1727.95	2835.44	892.64	892.64	92.30	78.99	29.06	24.86
D	T	215684.05	18201.33	3573.85	1031.00	308438.93	546929.16	668.00	704.00	5958.00	8210.00	18000.00	24805.00
	A	925.68	78.11	15.33	4.42	1323.77	2347.33	818.75	776.88	91.80	66.62	30.38	22.05
E	T	165870.63	5420.99	568.06		240750.75	412610.43	613.27	613.27	4647.00	6428.00	12390.76	10473.61
	A	721.18	23.57	2.47		46.74	1793.96	672.80	672.80	88.79	64.19	33.30	39.40
T	T	743579.62	40186.02	10664.52	4672.92	1095362.19	1894462.72	2418.23	2458.23	20472.00	27611.00	60924.28	75080.81
	A	890.51	48.12	12.77	5.59	1311.81	2268.81	783.40	770.66	92.53	68.61	31.09	25.23
1007300 - 1007315 ENGLISH													
A	T	80865.56	9175.29	1687.67	2805.82	146542.76	241077.20	266.64	266.64	2219.00	3074.00	5916.74	8196.51
	A	808.65	91.75	16.87	28.05	1465.42	2410.77	904.12	904.12	108.64	78.42	40.74	29.41
B	T	132007.45		616.62		114182.90	246806.97	375.00	375.00	2656.00	3325.00	8117.00	10185.00
	A	1073.23		5.01		928.31	2006.56	658.15	658.15	92.92	74.22	30.40	24.23
C	T	56483.79	3200.00	121.84	117.72	69770.23	129693.58	171.00	171.00	1313.00	1704.00	3939.00	5112.00
	A	990.94	56.14	2.13	2.06	1224.03	2275.32	758.44	758.44	98.77	76.11	32.92	25.37
D	T	166475.75	12122.38	2125.95	1735.93	148821.79	331281.80	393.00	396.00	2895.00	4100.00	8685.00	12300.00
	A	1261.17	91.83	16.10	13.15	1127.43	2509.71	842.95	836.57	114.43	80.80	38.14	26.93
E	T	79831.40	1101.33	737.43		118795.22	200465.38	301.30	301.30	2293.00	3142.00	6144.05	8377.82
	A	706.47	9.74	6.52		1051.28	1774.02	665.33	665.33	87.42	63.80	32.78	23.92
T	T	515664.05	25599.00	5289.51	4659.47	598112.90	1149324.93	1506.94	1509.94	11376.00	15345.00	32771.79	44171.33
	A	982.21	48.76	10.07	8.87	1139.26	2189.19	762.68	761.17	101.03	74.89	35.07	26.01
1007400 - 1007540 FOREIGN LANGUAGE													
A	T	8596.46	2059.87	514.29		8915.40	20086.02	39.99	39.99	135.00	305.00	359.96	813.25
	A	573.09	137.32	34.28		594.36	1339.06	502.27	502.27	148.78	65.85	55.80	24.69

1007400 - 1007540 FOREIGN LANGUAGE (cont.)

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment		Student Credit Hours	
										Mid-Term	Maximum	Mid-Term	Maximum
B	T	40889.46	1547.99	511.85		21353.93	64303.23	109.00	166.00	385.00	672.00	1518.00	2616.00
	A	1460.33	55.28	18.28		762.64	2296.54	589.94	387.37	167.02	95.69	42.36	24.58
C	T	4576.00		7.04	6.82	3688.55	8628.36	16.00	16.00	57.00	112.00	228.00	448.00
	A	1114.00		1.76	1.71	922.14	2157.09	539.27	539.27	151.37	77.04	37.84	19.26
D	T	61103.59	2685.63	413.28	569.70	29507.32	94279.52	144.00	177.00	437.00	1110.00	1722.00	4320.00
	A	1651.45	72.58	11.17	15.40	797.49	2548.10	654.72	532.65	215.74	84.94	54.75	21.82
E	T	32799.03	6753.00	353.37		16992.97	56898.37	101.32	124.65	328.00	950.00	874.57	2533.08
	A	863.13	177.71	9.30		447.18	1497.33	561.57	456.46	173.47	59.89	65.05	22.46
T	T	147964.54	13046.49	1799.83	576.52	80458.17	243845.55	410.31	523.64	1342.00	3140.00	4702.53	10730.33
	A	1212.82	106.94	14.75	4.73	659.49	1998.73	594.29	465.67	181.70	77.66	51.85	22.72

1007600 PHILOSOPHY

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment		Student Credit Hours	
										Mid-Term	Maximum	Mid-Term	Maximum
A	T	6575.34	422.99	188.21	69.54	12679.68	19935.76	21.33	21.33	192.00	280.00	511.94	746.59
	A	821.97	52.87	23.52	8.69	1584.96	2491.97	934.63	934.63	103.83	71.20	38.94	26.70
B	T	5250.00		9.47		6456.81	11716.28	21.00	21.00	153.00	237.00	459.00	711.00
	A	750.00		1.35		922.40	1673.75	557.80	557.80	76.58	49.44	25.53	16.48
C	T	10828.00	8399.99	36.20	34.98	20723.82	40022.99	42.00	42.00	390.00	504.00	1170.00	1512.00
	A	773.43	599.99	2.59	2.50	1480.27	2858.78	952.92	952.92	102.62	79.41	34.21	26.47
D	T	1960.90	65.51	8.70	11.93	171.36	2218.40	2.00	8.00	10.00	20.00	10.00	20.00
	A	980.45	32.76	4.35	5.97	85.68	1109.20	1109.20	277.30	221.84	110.92	221.84	110.92
E	T	7480.00				6683.20	14163.20	29.33	29.33	129.00	167.00	343.96	445.28
	A	680.00				607.56	1287.56	482.89	482.89	109.22	84.81	41.17	31.80
T	T	32094.24	8888.49	242.58	116.45	46714.87	88056.63	115.66	121.66	874.00	1208.00	2494.90	3434.87
	A	764.15	211.63	5.78	2.77	1112.26	2096.59	761.34	723.79	100.75	72.89	35.29	25.63

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment Mid-Term	Enrollment Maximum	Student Credit Hours Mid-Term	Student Credit Hours Maximum
1007800 - 1008200 SPEECH													
A	T	17187.99	449.87		46.10	37114.48	54798.44	74.65	74.65	562.00	700.00	1498.51	1866.48
	A	613.85	16.07		1.65	1325.52	1957.09	734.07	734.07	97.51	78.28	36.56	29.35
B	T	46800.00	2639.97	186.22		34478.57	84104.76	117.00	117.00	817.00	975.00	2451.00	2925.00
	A	1200.00	67.69	4.77		884.07	2156.53	718.84	718.84	102.94	86.26	34.31	28.75
C	T	11587.00		29.05	28.05	16632.19	28276.29	42.00	42.00	313.00	350.00	939.00	1050.00
	A	827.64		2.07	2.00	1188.01	2019.73	673.25	673.25	90.33	80.79	30.11	26.93
D	T	49227.18	1029.20	19.69	41.85	48424.94	98742.86	132.00	132.00	942.00	1090.00	2826.00	3270.00
	A	1118.79	23.39	.48	.95	1100.56	2244.16	748.05	748.05	104.82	90.59	34.94	30.19
E	T	8862.33		45.99		7408.51	16316.83	31.99	31.99	143.00	300.00	381.29	799.92
	A	738.53		3.83		617.38	1359.73	510.06	510.06	114.10	54.39	42.79	20.39
T	T	133664.50	4119.04	1956.95	116.00	144058.69	282239.18	397.64	397.64	2777.00	3415.00	8095.80	9911.40
	A	975.65	30.06	14.28	.84	1058.82	2060.14	709.78	709.78	101.63	82.65	34.86	28.48
1009110 - 1009200 ART & DESIGN													
A	T	12314.76	1766.88	1129.55	20.00	25623.52	40854.71	50.66	47.99	388.00	475.00	1034.56	1266.54
	A	648.15	92.99	59.45	1.05	1348.61	2150.25	806.44	851.31	105.30	86.01	39.48	32.25
B	T	29435.98	2024.00	808.08		17175.98	49444.04	70.00	121.00	536.00	661.00	1221.00	1460.00
	A	1015.03	69.79	27.86		592.28	1704.97	706.34	408.63	92.25	74.80	40.49	33.87
C	T	10825.06		540.62	21.01	13656.49	25043.18	39.00	39.00	257.00	380.00	771.00	1140.00
	A	832.70		41.59	1.62	1050.50	1926.40	642.13	642.13	97.44	65.90	32.48	21.97
D	T	50918.15		1177.38	669.95	39068.94	91834.42	122.00	200.00	763.00	996.00	2280.00	2968.00
	A	960.72		22.21	12.64	737.15	1732.72	752.74	459.17	120.36	92.20	40.28	30.94
E	T	29166.58		3243.34		19894.18	52304.10	45.99	151.98	384.00	580.00	1023.89	1546.51
	A	1215.27		135.14		828.92	2179.34	1137.29	344.15	136.21	90.18	51.08	33.82
T	T	132660.53	3790.88	6898.97	710.96	115419.11	259480.45	327.65	559.97	2328.00	3092.00	6330.45	8381.05
	A	961.31	27.47	49.99	5.15	836.37	1880.29	791.94	463.38	111.46	83.93	40.98	30.96

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment Mid-Term	Enrollment Maximum	Student Credit Hours Mid-Term	Student Credit Hours Maximum
1009300 DRAMA													
D	T	18636.09		1284.38	4125.34	13288.60	37274.41	33.00	33.00	270.00	380.00	772.00	1095.00
	A	1553.01		107.03	343.78	1107.38	3106.20	1129.53	1129.53	138.05	98.09	48.28	34.04
E	T	3057.50		20.59		3315.70	6393.79	10.66	10.66	64.00	112.00	170.64	298.63
	A	764.38		5.15		829.93	1598.44	599.79	599.79	99.90	57.08	37.46	21.41
T	T	21693.59		1304.97	4125.34	16604.30	43668.20	43.66	43.66	334.00	492.00	942.64	1393.63
	A	1355.85		81.56	257.83	1037.76	2729.26	1000.18	1000.18	130.74	88.76	46.32	31.33
1009400 - 1009330 MUSIC													
A	T	19258.00	914.94	1488.04	665.57	25285.00	47611.64	48.66	69.32	487.00	886.00	1020.89	1382.52
	A	713.26	33.86	55.11	24.65	936.48	1763.39	978.45	686.83	97.77	53.74	46.63	34.43
B	T	42200.01	1000.05	3632.98	15.03	18062.20	64210.27	95.00	115.00	691.00	1386.00	1284.00	2636.00
	A	981.40	23.26	84.49	.35	420.05	1493.26	675.90	558.35	92.92	46.33	50.01	24.36
C	T	2100.00		19.54	7.19	4286.48	6413.21	10.00	10.00	130.00	214.00	242.00	358.00
	A	350.00		3.26	1.20	714.41	1068.87	641.32	641.32	49.33	29.97	26.50	17.91
D	T	49890.85	17124.55	2271.51	3114.08	45666.08	118067.07	152.00	229.00	1057.00	1900.00	2665.00	4040.00
	A	593.94	203.86	27.04	37.07	543.64	1405.56	776.75	515.58	111.70	62.14	44.30	29.22
E	T	11184.01		785.78		6644.34	18614.13	27.33	33.33	164.00	416.00	341.96	701.26
	A	798.86		56.13		474.60	1329.58	681.08	558.47	113.50	44.75	54.43	26.54
T	T	124632.87	19039.54	8197.85	3801.87	99944.10	254916.32	332.99	457.31	2529.00	4802.00	5553.85	9117.78
	A	716.28	109.42	47.11	21.84	574.39	1465.03	765.53	557.42	100.79	53.08	45.89	27.95
1011000 - 1011900 BUSINESS													
A	T	68030.74	11002.13	164.70	1466.65	130825.24	212389.46	274.63	301.96	1981.00	2807.00	5282.13	7484.58
	A	660.49	106.82	1.60	14.23	1270.15	2062.03	773.36	703.36	107.21	75.66	40.20	28.37
B	T	600.00		5.23	69.26	422.01	1096.50	3.00	3.00	10.00	35.00	30.00	105.00
	A	600.00		5.23	69.26	422.01	1096.50	365.50	365.50	1109.65	31.33	36.55	10.44

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment Mid-Term	Enrollment Maximum	Student Credit Hours Mid-Term	Student Credit Hours Maximum
1011000 - 1011900 BUSINESS (cont.)													
C	T	23515.60	842.90	682.81	322.48	19714.20	45175.24	57.00	57.00	371.00	608.00	1113.00	1824.00
	A	1237.66	44.36	35.94	16.97	1037.59	2377.64	792.55	792.55	121.77	74.30	40.59	24.76
E	T	61774.66	4648.77	40.77		58542.82	125007.02	199.98	200.64	1130.00	2078.00	2364.43	5540.77
	A	823.66	61.98	54.36		780.57	1666.76	625.09	623.04	110.63	60.16	52.86	22.56
T	T	153921.00	16493.80	893.51	1858.39	209504.27	383668.22	534.61	562.60	3492.00	5528.00	8789.56	14954.35
	A	777.38	83.30	4.51	9.39	1058.10	7937.71	717.66	681.95	109.87	69.40	43.65	25.65
1012000 - 1012600 EDUCATION													
B	T	16636.57	3515.56	224.38	742.38	21480.51	42599.40	60.00	60.00	509.00	675.00	1527.00	2025.00
	A	831.83	175.78	11.22	37.12	1074.02	2129.97	709.99	709.99	83.69	63.11	27.90	21.04
D	T	18125.02		100.95	85.92	20099.95	38411.84	48.00	51.00	391.00	527.00	1173.00	1581.00
	A	1132.81		6.31	5.37	1256.25	2400.74	800.25	753.17	98.24	72.89	32.75	24.30
T	T	34761.59	3515.56	325.33	828.30	41580.46	81011.24	108.00	111.00	900.00	1202.00	2700.00	3606.00
	A	965.60	97.65	9.04	23.01	1155.01	2250.31	750.10	729.83	90.01	67.40	30.00	22.47
1013000 - 1013400 HOME ECONOMICS													
A	T	3195.33	430.63	311.68	16.53	5481.32	9435.49	10.66	10.66	83.00	84.00	221.31	223.97
	A	798.83	107.66	77.92	4.13	1370.33	2358.87	885.13	885.13	113.68	112.33	42.63	42.12
B	T	19598.76	868.97	830.66		9579.71	30878.10	50.00	62.00	243.00	424.00	681.00	1176.00
	A	1088.82	48.28	46.15		532.21	1715.45	617.56	498.03	127.07	72.83	45.34	26.26
C	T	1972.35		207.65		1062.76	3242.76	6.00	6.00	20.00	28.00	60.00	84.00
	A	986.18		103.83		531.38	1621.38	540.46	540.46	162.14	115.81	54.04	38.60
T	T	24766.44	1299.60	1349.99	16.53	16123.79	43556.35	66.66	78.66	346.00	536.00	962.31	1483.97
	A	1031.94	54.15	56.24	.69	671.82	1814.85	653.41	553.72	125.89	81.26	45.26	29.35

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment Mid-Term	Enrollment Maximum	Student Credit Hours Mid-Term	Student Credit Hours Maximum
1014000 JOURNALISM													
B	T	1230.00	4920.00	.23		42.20	6192.43	3.00	3.00	1.00	20.00	3.00	60.00
	A	1230.00	4920.00	.23		42.20	6192.43	2064.14	2064.14	6192.43	309.62	2064.14	103.21
C	T	1844.22				425.11	2269.33	4.00	5.32	12.00	40.00	24.00	80.00
	A	922.11				212.56	1134.67	567.33	426.56	189.11	56.73	94.56	28.37
D	T	1747.00		22.24	18.83	1593.59	3381.66	7.00	10.00	40.00	60.00	93.00	150.00
	A	582.37		7.47	62.76	531.20	1127.22	483.09	338.17	84.54	56.36	36.36	22.54
E	T	1940.00	8.80	5.78		932.54	2887.12	5.33	5.33	18.00	40.00	47.99	106.65
	A	970.00	4.40	2.89		466.27	1442.56	541.67	541.67	160.40	72.18	60.16	27.07
T	T	6761.22	4928.80	28.25	18.83	2993.44	14730.54	19.33	23.65	71.00	160.00	167.99	396.65
	A	845.15	616.10	3.53	2.35	374.18	1841.32	762.05	622.85	207.47	92.07	87.68	37.13
1020000 - 1020720 EDUCATIONAL SERVICES													
A	T	48629.47	18585.52	4127.04	4568.57	92059.77	167970.37	227.97	287.30	3360.00	4318.00	3716.96	4762.85
	A	224.10	85.65	19.02	21.05	424.24	774.06	736.80	584.65	49.99	38.90	45.19	35.26
B	T	86585.97	7028.03	3448.62	2398.17	45310.31	144771.10	96.00	200.00	2730.00	2860.00	3221.00	3340.00
	A	1055.93	85.71	42.06	29.25	552.56	1765.50	1508.03	723.85	53.03	50.62	44.95	43.34
C	T	24939.99		423.98	8.01	22087.70	47459.68	59.00	69.26	858.00	1362.00	1247.00	1974.00
	A	593.81		10.09	.19	525.90	1129.99	804.40	685.23	55.31	34.84	38.06	24.04
D	T	30035.34		1898.35	11535.55	10932.47	54401.71	38.00	76.00	638.00	822.00	638.00	822.00
	A	790.40		49.96	303.56	287.70	1431.62	1431.62	715.81	85.27	66.18	85.27	66.18
E	T	44560.66	7772.88	2013.48		38363.70	92710.72	74.65	140.65	2952.00	3387.00	1974.46	2257.77
	A	397.86	69.40	17.98		342.53	827.77	1241.93	827.77	31.40	27.37	46.95	41.06
T	T	234751.43	33386.43	11911.47	18510.30	208753.95	507313.58	495.62	773.21	10538.00	12749.00	10794.42	13156.62
	A	478.11	68.00	24.26	37.70	425.16	1033.23	1023.59	656.11	48.98	39.79	46.98	38.55

OCCUPATIONAL

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment Mid-Term	Enrollment Maximum	Student Credit Hours Mid-Term	Student Credit Hours Maximum
2-01.0100 AGRICULTURAL PRODUCTION													
A	T	1033.49	39.84	34.85	29.37	924.56	2062.11	5.33	5.33	14.00	35.00	37.32	93.32
	A	516.75	19.92	17.43	14.67	462.28	1031.06	386.88	386.88	147.29	58.92	55.25	22.10
B	T	11720.00	339.63	1075.07	120.67	5289.24	18544.61	20.00	20.00	84.00	92.00	376.00	448.00
	A	2930.00	84.91	268.77	30.17	1322.31	4636.15	927.23	927.23	220.77	201.57	49.32	41.39
C	T	1300.00		395.29	94.12	1417.01	3206.42	5.00	5.00	16.00	25.00	80.00	125.00
	A	1300.00		395.29	94.12	1417.01	3206.42	641.28	641.28	200.40	128.25	40.08	25.65
D	T	22319.69	10808.03	885.96	277.53	13725.52	48016.73	60.00	75.50	215.00	320.00	801.00	1230.00
	A	1115.98	540.40	44.30	13.88	686.28	2400.84	800.28	635.98	223.33	150.05	59.95	39.04
E	T	4555.03		144.86		1036.16	5736.05	13.33	35.99	16.00	60.00	53.32	266.64
	A	1518.34		48.29		345.38	1912.02	430.31	159.37	358.50	95.60	107.57	21.51
T	T	40928.21	11187.50	2536.03	521.69	22392.49	77565.92	103.66	141.82	345.00	532.00	1347.64	2162.96
	A	1364.27	372.91	84.53	17.39	746.42	2585.53	748.27	546.93	224.82	145.80	57.56	35.86
2-01.0101 ANIMAL SCIENCE													
A	T	3833.55	179.32	156.79	132.15	4160.52	8462.33	13.33	13.33	63.00	120.00	167.98	319.96
	A	766.71	35.86	31.36	26.43	832.10	1692.47	634.83	634.83	134.32	70.52	50.38	26.45
C	T	2439.36		266.82	63.52	956.48	3726.18	6.00	12.00	18.00	50.00	54.00	150.00
	A	1219.68		133.41	31.76	478.24	1863.09	621.03	310.52	207.01	74.52	69.00	24.84
T	T	6272.91	179.32	423.61	195.67	5117.00	12188.51	19.33	25.33	81.00	170.00	221.98	469.96
	A	896.13	25.62	60.52	27.95	731.00	1741.21	630.54	481.18	150.48	71.70	54.91	25.94
2-01.0102 PLANT SCIENCE													
A	T	789.13	48.39	42.31	35.66	1122.68	2038.17	2.66	2.66	17.00	20.00	45.32	53.32
	A	789.13	48.39	42.31	35.66	1122.68	2038.17	766.22	766.22	119.89	101.91	44.97	38.23
C	T	5050.72		928.94	221.18	3329.98	9530.82	16.00	17.00	60.00	125.00	188.00	400.00
	A	1010.14		185.79	44.24	666.00	1906.16	595.68	560.64	158.85	76.25	50.70	23.83

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment		Student Credit Hours	
										Mid-Term	Maximum	Mid-Term	Maximum
2-01.0102 PLANT SCIENCE (cont.)													
E	T	4125.08		492.50		3522.93	8140.51	13.33	19.93	68.00	100.00	181.31	266.64
	A	825.02		98.50		704.59	1628.10	610.69	408.45	119.71	81.41	44.90	30.53
T	T	9964.93	48.39	1463.75	256.84	7975.59	19709.50	31.99	39.59	145.00	245.00	414.63	719.96
	A	905.90	4.40	133.07	23.35	725.05	1791.77	616.11	497.84	135.93	80.45	47.54	27.38
2-01.0104 FARM BUSINESS MANAGEMENT													
A	T	7504.23	304.53	266.32	224.44	7066.28	15365.80	26.66	26.66	107.00	230.00	285.30	613.27
	A	750.42	30.45	26.63	22.44	706.63	1536.58	576.36	576.36	143.60	66.80	53.85	25.05
B	T	1769.23	49.68	157.26	17.65	773.69	2767.51	5.00	5.00	11.00	20.00	55.00	100.00
	A	1769.23	49.68	157.26	17.65	773.69	2767.51	553.50	553.50	251.59	138.37	50.32	27.68
C	T	1219.68		133.41	31.76	478.24	1863.09	3.00	6.00	9.00	25.00	27.00	75.00
	A	1219.68		133.41	31.76	478.24	1863.09	621.03	310.51	207.01	74.52	69.00	24.84
E	T	2532.00		282.47		2020.51	4834.98	7.99	11.33	39.00	60.00	103.98	159.98
	A	844.00		94.15		673.50	1611.66	605.12	434.40	123.97	80.58	46.49	30.22
T	T	13025.14	354.21	839.46	273.85	10338.72	24831.38	42.65	48.99	166.00	335.00	471.28	948.25
	A	868.34	23.61	55.96	18.25	689.24	1655.42	582.21	506.86	149.58	74.12	52.68	26.18
2-01.0200 AGRICULTURE SUPPLIES & SERVICES													
B	T	16638.80	609.70	1929.98	216.64	9495.32	28890.44	27.00	27.00	135.00	140.00	600.00	675.00
	A	2773.13	101.61	321.66	36.10	1582.55	4815.07	1070.01	1070.01	214.00	206.36	42.80	48.15
D	T	10032.48		999.95	335.65	6580.03	17948.11	34.00	34.00	108.00	210.00	384.00	780.00
	A	1254.06		124.99	41.95	822.50	2243.51	527.88	527.88	166.18	85.46	46.74	23.01
E	T	6081.63		427.33		3056.66	9565.62	21.33	54.66	35.00	80.00	157.31	426.62
	A	1520.40		106.83		764.16	2391.41	448.45	175.00	273.30	119.57	60.80	22.42
T	T	32752.91	609.70	3357.26	1252.29	19132.01	56404.17	82.33	115.66	278.00	430.00	1216.31	1806.62
	A	1819.60	33.87	186.51	69.57	1062.88	3133.56	685.09	487.67	202.89	131.17	46.37	31.22

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment Mid-Term	Enrollment Maximum	Student Credit Hours Mid-Term	Student Credit Hours Maximum
2-01.0201 AGRICULTURE CHEMICALS													
B	T	2900.00	143.61	454.62	51.02	2236.68	5785.93	9.00	10.00	53.00	54.00	159.00	162.00
	A	966.67	47.87	151.54	17.17	745.56	1928.64	642.88	578.59	109.17	107.15	36.39	35.72
E	T	2400.00		101.40		725.31	3226.71	2.66	3.99	14.00	20.00	37.32	53.32
	A	2400.00		101.40		725.31	3226.71	1213.05	808.70	230.47	161.34	86.46	60.52
T	T	5300.00	143.61	556.02	51.02	2961.99	9012.64	11.66	13.99	67.00	74.00	196.32	215.32
	A	1325.00	35.90	139.01	12.76	740.50	2252.91	772.95	644.22	134.52	121.79	45.91	41.86
2-01.0202 FEEDS													
B	T	5125.66	154.46	488.93	54.88	2405.48	8229.41	9.00	9.00	57.00	60.00	171.00	180.00
	A	1708.55	51.49	162.98	18.29	801.83	2743.14	914.38	914.38	144.38	137.16	48.13	45.72
E	T	2373.34		188.32		1347.00	3908.66	5.33	7.99	26.00	40.00	69.32	106.65
	A	1186.67		94.16		673.50	1954.33	733.33	489.19	150.33	97.72	56.39	36.65
T	T	7499.00	154.46	677.25	54.88	3752.48	12138.07	14.33	16.99	83.00	100.00	240.32	286.65
	A	1499.80	30.89	135.45	10.98	750.50	2427.61	847.04	714.42	146.24	121.38	50.51	42.34
2-01.0204 FERTILIZERS (PLANT FOOD)													
B	T	3330.76	105.69	446.04	50.07	2194.48	6127.04	9.00	12.00	52.00	54.00	156.00	162.00
	A	1110.25	35.23	148.68	16.69	731.49	2042.35	680.78	510.59	680.78	113.46	39.28	37.82
C	T	609.84		118.59	28.24	425.10	1181.77	3.00	3.00	8.00	25.00	24.00	75.00
	A	609.84		118.59	28.24	425.10	1181.77	393.92	393.92	147.72	47.27	49.24	15.76
E	T	1600.00		115.89		828.92	2544.81	2.66	2.66	16.00	20.00	42.66	53.32
	A	1600.00		115.89		828.92	2544.81	956.70	956.70	159.05	127.24	59.65	47.73
T	T	5540.60	105.69	680.52	78.31	3448.50	9853.62	14.66	17.66	76.00	99.00	222.66	290.32
	A	1108.12	21.14	121.70	15.66	689.70	1970.72	672.14	557.96	129.65	99.53	44.25	33.94

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment Mid-Term	Enrollment Maximum	Student Credit Hours Mid-Term	Student Credit Hours Maximum
2-01.0300 AGRICULTURE MECHANICS													
D	T	19201.89	1822.98	3085.05	400.03	4969.32	29479.27	52.00	80.50	99.00	235.00	290.00	790.00
	A	1129.52	107.23	181.47	23.53	292.31	1734.07	566.91	366.20	297.77	125.44	101.65	37.32
T	T	19201.89	1822.98	3085.05	400.03	4969.32	29479.27	52.00	80.50	99.00	235.00	290.00	790.00
	A	1129.52	107.23	181.47	23.53	292.31	1734.07	566.91	366.20	297.77	125.44	101.65	37.32
2-01.0301 AGRICULTURE POWER & MACHINERY													
A	T	2892.75	102.47	89.60	75.51	2377.44	5537.77	5.33	6.66	36.00	50.00	95.99	133.32
	A	1446.38	51.24	44.80	37.76	7188.72	2768.89	1038.98	831.50	153.82	110.76	57.69	41.54
B	T	3788.80	78.59	343.10	38.51	1688.06	5937.06	9.00	10.00	40.00	36.00	120.00	108.00
	A	947.20	19.65	85.78	962.75	422.02	1484.27	659.67	593.71	148.43	164.92	49.48	54.97
C	T	1232.00		296.47	70.59	1062.76	2661.82	4.00	4.00	15.00	25.00	60.00	100.00
	A	1232.00		296.47	70.59	1062.76	2661.82	665.46	665.46	177.45	106.47	44.36	26.62
E	T	10351.05		637.88		4507.27	15496.20	34.66	71.99	72.00	177.00	231.97	621.27
	A	1035.11		63.79		450.73	1549.62	447.09	215.25	215.23	87.55	66.80	24.94
T	T	18264.60	181.06	1367.05	184.61	9635.53	29632.85	52.99	92.65	163.00	288.00	507.96	962.59
	A	1074.39	10.65	80.41	10.86	566.80	1743.11	559.22	319.84	181.80	102.89	58.34	30.78
2-01.0302 AGRICULTURE STRUCTURES & CONVENIENCES													
C	T	1694.00		256.94	61.18	921.06	2933.18	4.00	5.50	13.00	25.00	52.00	100.00
	A	1694.00		256.94	61.18	921.06	2933.18	733.30	533.31	225.63	117.33	56.41	29.33
T	T	1694.00		256.94	61.18	921.06	2933.18	4.00	5.50	13.00	25.00	52.00	100.00
	A	1694.00		256.94	61.18	921.06	2933.18	733.30	533.31	225.63	117.33	56.41	29.33
2-01.0305 AGRICULTURE MECHANICS SKILLS													
A	T	7212.05	318.78	278.76	234.93	7396.48	15441.00	19.99	29.33	120.00	178.00	298.63	450.62
	A	721.21	31.88	27.88	23.49	739.65	1544.10	772.44	526.46	128.68	86.75	51.71	34.27

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment		Student Credit Hours	
										Mid-Term	Maximum	Mid-Term	Maximum
2-01.0305 AGRICULTURE MECHANICS SKILLS (cont.)													
T	T	7212.05	318.78	278.76	234.93	7396.48	15441.00	19.99	29.33	120.00	178.00	298.63	450.62
	A	721.21	31.88	27.88	23.49	739.65	1544.10	772.44	526.46	128.68	86.75	51.71	34.27
2-01.0306 AGRICULTURE CONSTRUCTION & MAINTENANCE													
A	T	5219.20	230.54	201.60	169.90	5349.24	11170.48	19.33	19.33	93.00	172.00	215.97	421.29
	A	652.40	28.82	25.20	21.20	668.66	1396.31	577.88	577.88	120.11	64.94	51.72	26.51
	T	5219.20	230.54	201.60	169.90	5349.24	11170.48	19.33	19.33	93.00	172.00	215.97	421.29
	A	652.40	28.82	25.20	21.20	668.66	1396.31	577.88	577.88	120.11	64.94	51.72	26.51
2-01.0500 ORNAMENTAL HORTICULTURE													
B	T	5357.14		354.55	39.79	1744.33	7495.81	9.00	12.00	41.00	60.00	124.00	174.00
	A	1339.29		88.64	9.95	436.08	1873.95	832.87	624.65	182.82	124.93	60.45	43.08
T	T	5357.14		354.55	39.79	1744.33	7495.81	9.00	12.00	41.00	60.00	124.00	174.00
	A	1339.29		88.64	9.95	436.08	1873.95	832.87	624.65	182.82	124.93	60.45	43.08
2-01.0504 LANDSCAPING													
B	T	1537.50		180.13	20.22	886.23	2624.08	6.00	6.00	21.00	36.00	63.00	108.00
	A	768.75		90.07	10.11	443.12	1312.04	437.35	437.35	124.96	72.89	41.65	24.30
T	T	1537.50		180.13	20.22	886.23	2624.08	6.00	6.00	21.00	36.00	63.00	108.00
	A	768.75		90.07	10.11	443.12	1312.04	437.35	437.35	124.96	72.89	41.65	24.30
2-01.0602 RECREATION													
E	T	10103.25		24777.97		13729.06	48610.28	34.66	53.32	254.00	360.00	706.59	1039.89
	A	841.94		2064.83		1114.09	4050.86	1402.48	911.67	191.38	135.03	68.80	46.75
T	T	10103.25		24777.97		13729.06	48610.28	34.66	53.32	254.00	360.00	706.59	1039.89
	A	841.94		2064.83		1114.09	4050.86	1402.48	911.67	191.38	135.03	68.80	46.75

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment		Student Credit Hours	
										Mid-Term	Maximum	Mid-Term	Maximum
2-01.0603 SOIL (AGRICULTURAL RESOURCES)													
B	T	2712.50	51.49	323.10	36.26	1589.59	4712.94	7.00	8.00	33.00	36.00	113.00	126.00
	A	904.17	17.16	107.70	12.09	529.87	1570.98	673.28	589.12	142.82	130.92	41.71	37.40
T	T	2712.50	51.49	323.10	36.26	1589.59	4712.94	7.00	8.00	33.00	36.00	113.00	126.00
	A	904.17	17.16	107.70	12.09	529.87	1570.98	673.28	589.12	142.82	130.92	41.71	37.40
2-01.9900 AGRICULTURE, OTHER													
A	T	16268.66	700.18	612.29	516.02	16245.85	34343.00	56.66	15.33	249.00	310.00	655.93	866.58
	A	707.33	30.44	26.62	22.44	706.34	1493.17	606.12	2240.25	137.92	110.78	52.36	39.63
B	T	19816.19	468.80	1483.93	166.59	7300.85	29236.36	33.00	33.00	143.00	190.00	519.00	720.00
	A	2201.80	52.09	164.88	18.51	811.21	3248.48	885.95	885.95	204.45	153.88	56.33	40.61
E	T	17386.22		1513.75		10827.80	29727.77	61.32	116.65	193.00	355.00	557.27	1266.54
	A	1022.72		89.04		636.93	1748.69	484.80	254.85	154.03	83.74	53.35	23.47
T	T	53471.07	1168.08	3609.97	682.61	34374.50	93307.13	150.98	164.98	585.00	855.00	1732.20	2853.12
	A	1091.25	23.84	73.67	13.93	701.52	1904.23	618.00	565.57	159.50	109.13	53.86	32.70
2-04.0100 ADVERTISING SERVICES													
B	T	19816.19	468.80	1483.93	166.59	1772.46	4013.54	6.00	6.00	42.00	70.00	126.00	210.00
	A	9908.10	234.40	741.97	83.30	886.23	2006.77	668.92	668.92	95.56	57.34	31.85	19.11
T	T	19816.19	468.80	1483.93	166.59	1772.46	4013.54	6.00	6.00	42.00	70.00	126.00	210.00
	A	9908.10	234.40	741.97	83.30	886.23	2006.77	668.92	668.92	95.56	57.34	31.85	19.11
2-04.0700 FOOD SERVICES (SALES)													
B	T	6883.00	3607.00	634.80		1364.51	12489.31	10.00	6.00	19.00	30.00	97.00	150.00
	A	3441.50	1803.50	317.40		682.26	6244.66	1248.93	2081.55	657.33	413.31	128.76	83.26
T	T	6883.00	3607.00	634.80		1364.51	12489.31	10.00	6.00	19.00	30.00	97.00	150.00
	A	3441.50	1803.50	317.40		682.26	6244.66	1248.93	2081.55	657.33	413.31	128.76	83.26

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment Mid-Term	Enrollment Maximum	Student Credit Hours Mid-Term	Student Credit Hours Maximum
2-04.1700 REAL ESTATE (SALES)													
A	T	1280.00	233.26	4.85	37.57	2773.68	4329.36	5.33	7.99	42.00	50.00	111.98	133.32
	A	426.67	77.75	1.62	12.53	924.56	1443.12	812.26	541.85	103.08	86.59	38.66	32.47
B	T	3000.00		53.88	713.35	4346.73	8113.96	15.00	15.00	103.00	150.00	309.00	450.00
	A	600.00		10.78	122.23	869.35	1622.79	540.93	540.93	78.78	54.09	26.26	18.03
D	T	1213.50	337.52	5.68	7.19	1593.60	3157.49	3.00	3.00	31.00	40.00	93.00	120.00
	A	1213.50	337.52	5.68	7.19	1593.60	3157.49	1052.50	1052.50	101.86	78.94	33.95	26.31
T	T	5493.50	570.78	64.41	758.11	8714.01	15600.81	23.33	25.99	176.00	240.00	513.98	703.32
	A	610.39	63.42	7.16	84.23	968.22	1733.42	668.70	600.26	88.64	65.00	30.35	22.18
2-04.1900 TRANSPORTATION													
A	T	1125.00	134.68	2.79	21.70	1601.47	2885.64	6.66	7.99	29.00	55.00	64.66	119.98
	A	375.00	44.89	.93	7.23	533.82	961.88	433.28	361.16	99.50	52.47	44.63	24.05
B	T	600.00		135.47	11.32	590.82	1337.61	3.00	3.00	14.00	30.00	42.00	90.00
	A	600.00		135.47	11.32	590.82	1337.61	445.87	445.87	95.54	44.59	31.85	14.86
D	T	3250.00		217.25	14.21	2775.95	6257.41	18.00	18.00	54.00	200.00	162.00	600.00
	A	541.66		36.21	2.37	462.66	1042.90	347.63	347.63	115.88	31.29	38.63	10.43
T	T	4975.00	134.68	355.51	47.23	4968.24	10480.66	27.66	28.99	97.00	285.00	268.66	809.98
	A	497.50	13.47	35.55	4.72	496.82	1048.06	378.91	349.47	108.05	36.77	39.01	12.94
2-04.2000 RETAIL TRADE, OTHER													
	T	1260.00		8.37	110.81	675.22	2054.40	3.00	3.00	16.00	35.00	48.00	105.00
	A	1260.00		8.37	110.81	675.22	2054.40	684.80	684.80	128.40	58.70	42.80	19.57
	T	1260.00		8.37	110.81	675.22	2054.40	3.00	3.00	16.00	35.00	48.00	105.00
	A	1260.00		8.37	110.81	675.22	2054.40	684.80	684.80	128.40	58.70	42.80	19.57

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment Mid-Term	Enrollment Maximum	Student Credit Hours Mid-Term	Student Credit Hours Maximum
2-07.0101 DENTAL ASSISTING													
A	T	19321.17	5250.51	2804.36	910.53	20076.16	48362.73	57.32	63.99	388.00	664.00	810.58	1394.52
	A	715.60	194.46	103.87	33.72	743.56	1791.21	843.73	755.79	124.65	72.84	59.66	34.68
C	T	6300.01		2937.84	628.69	6411.99	16278.53	30.00	47.00	120.00	300.00	362.00	900.00
	A	630.00		293.78	62.87	641.20	1627.85	542.62	346.35	135.65	54.26	44.97	18.09
E	T	22610.34		2587.72		9739.86	34937.92	42.66	86.65	168.00	152.00	501.28	479.95
	A	1615.02		184.84		695.70	2495.57	818.99	403.21	207.96	229.85	69.70	72.79
T	T	48231.52	5250.51	8329.92	1539.22	36228.01	99579.18	129.98	197.64	676.00	1116.00	1673.86	2774.47
	A	945.72	102.95	163.33	30.18	710.35	1952.53	766.11	503.84	147.31	89.23	59.49	35.89
2-07.0102 DENTAL HYGIENE (ASSOCIATE DEGREE)													
A	T	18669.91	3747.88	2001.75	649.99	14330.68	39400.21	37.32	75.32	276.00	450.00	578.60	933.24
	A	1037.22	208.21	111.21	36.11	796.15	2188.90	1055.74	523.10	142.75	87.56	68.10	42.22
E	T	20653.67		2265.14		7978.40	30897.21	42.66	89.32	146.00	366.00	410.62	943.90
	A	1376.91		151.00		531.89	2059.81	724.27	345.92	211.62	84.42	75.25	32.73
T	T	39323.58	3747.88	4266.89	649.99	22309.08	70297.42	79.98	164.64	422.00	816.00	989.22	1877.14
	A	1191.62	113.57	129.30	19.70	676.03	2130.22	878.94	426.98	166.58	86.15	71.06	37.45
2-07.0301 NURSING (ASSOCIATE DEGREE)													
B	T	26660.00		422.72	79.47	4712.49	31874.68	27.00	40.00	140.00	295.00	335.00	830.00
	A	2221.67		35.23	6.62	392.71	2656.22	1180.54	796.87	227.68	108.05	95.15	38.40
D	T	82883.40	29251.27	1079.56	1376.54	34596.57	149187.34	77.00	230.00	515.00	585.00	2019.00	1999.00
	A	1973.41	696.46	25.70	32.77	823.73	3552.08	1937.49	648.64	289.68	255.02	73.89	74.63
E	T	51259.00		1046.20		21293.02	73598.22	87.99	153.98	212.00	250.00	1095.89	1279.87
	A	3015.24		61.54		1252.53	4329.31	836.44	477.97	347.16	294.39	67.16	57.50
T	T	160802.40	29251.27	2548.48	1456.01	60602.08	254660.24	191.99	423.98	867.00	1130.00	3449.89	4108.87
	A	2264.82	411.99	35.90	20.51	853.55	3586.76	1326.42	600.64	293.73	225.36	73.82	57.87

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment Mid-Term	Enrollment Maximum	Student Credit Hours Mid-Term	Student Credit Hours Maximum
2-07.0302 PRACTICAL (VOCATIONAL) NURSING													
A	T	32198.84	12272.16	1332.73	513.73	36322.03	82639.49	127.98	175.98	343.00	430.00	1466.52	2133.12
	A	1463.58	557.83	57.86	23.35	1651.00	3756.34	645.72	469.60	240.93	192.18	56.35	38.74
C	T	32416.53	2512.99	464.52	887.81	18026.54	54308.39	42.00	134.00	259.00	275.00	1052.00	1078.00
	A	2161.10	167.53	30.97	59.19	1201.77	3620.56	1293.06	405.29	209.68	197.49	51.62	50.38
T	T	64615.37	14785.15	1797.25	1401.54	54348.57	136947.88	169.98	309.98	602.00	705.00	1477.04	3211.12
	A	1746.36	399.60	48.57	37.88	1468.88	3701.29	805.67	441.80	227.49	194.25	92.72	42.65
2-07.0305 SURGICAL TECHNICIAN (OPERATING ROOM TECHNICIAN)													
D	T	17752.00		1150.44	173.60	4249.60	23325.64	34.00	74.00	29.00	40.00	248.00	340.00
	A	4438.00		287.61	43.40	1062.40	5831.41	686.05	315.21	804.33	583.14	94.05	68.60
T	T	17752.00		1150.44	173.60	4249.60	23325.64	34.00	74.00	29.00	40.00	248.00	340.00
	A	4438.00		287.61	43.40	1062.40	5831.41	686.05	315.21	804.33	583.14	94.05	68.60
2-07.0402 PHYSICAL THERAPY ASSISTANT													
D	T	23028.15		892.96	974.81	4301.01	29196.93	25.00	89.00	42.00	48.00	251.00	300.00
	A	1919.01		74.41	81.23	358.42	2433.08	1167.87	328.06	695.17	608.27	116.32	97.32
T	T	23028.15		892.96	974.81	4301.01	29196.93	25.00	89.00	42.00	48.00	251.00	300.00
	A	1919.01		74.41	81.23	358.42	2433.08	1167.87	328.06	695.17	608.27	116.32	97.32
2-07.9900 HEALTH OCCUPATIONS, OTHER													
D	T	15761.70		541.27	204.50	4386.68	20894.15	29.00	51.00	72.00	162.00	256.00	606.00
	A	2251.67		77.32	29.21	626.67	2984.88	720.49	409.69	290.20	128.98	81.62	34.48
E	T	16923.65	1629.01	850.47		13780.89	33184.02	45.32	67.99	266.00	340.00	709.26	906.57
	A	995.51	95.82	50.03		810.64	1952.00	732.22	488.07	124.75	97.60	46.79	36.60
T	T	32685.35	1629.01	1391.74	204.50	18167.57	54078.17	74.32	118.99	338.00	502.00	965.26	1512.57
	A	1361.89	67.88	57.99	29.21	756.98	2253.26	727.64	454.88	159.99	107.73	56.02	35.75

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment Mid-Term	Enrollment Maximum	Student Credit Hours Mid-Term	Student Credit Hours Maximum
2-09.0102 CHILD DEVELOPMENT													
A	T	3467.80	337.23	244.09	12.95	4292.60	8354.67	15.99	5.33	47.00	110.00	173.31	479.95
	A	866.95	84.31	61.02	3.23	1073.15	2088.67	522.49	1567.48	177.75	75.95	48.20	17.40
D	T	606.00		24.84	27.02	462.66	1120.52	2.00	4.00	27.00	40.00	27.00	40.00
	A	303.00		12.42	13.51	231.33	560.26	560.26	280.13	41.50	28.01	41.50	28.01
E	T	8437.00		243.74		5491.61	14172.35	18.66	42.66	106.00	210.00	282.63	559.94
	A	1205.28		34.82		784.51	2024.62	759.50	332.21	133.70	67.48	50.14	25.31
T	T	12510.80	337.23	512.67	39.97	10246.87	23647.54	36.65	51.99	180.00	360.00	482.94	1079.89
	A	962.36	25.94	39.43	3.07	788.22	1819.04	645.22	454.84	131.37	65.68	48.96	21.89
2-09.0201 CARE & GUIDANCE OF CHILDREN													
C	T	2602.35		1436.45	307.41	3135.14	7481.35	9.00	9.00	59.00	108.00	177.00	324.00
	A	867.45		478.81	102.47	1045.04	2493.78	831.26	831.26	126.80	69.27	42.27	23.09
D	T	7593.74	2622.00	186.43	356.37	4729.39	15487.93	18.00	20.00	92.00	156.00	276.00	468.00
	A	1265.62	437.00	31.07	59.39	788.23	2581.32	860.44	774.39	168.34	99.28	56.12	33.09
T	T	10196.09	2622.00	1622.88	663.78	7864.53	22969.28	27.00	29.00	151.00	264.00	453.00	792.00
	A	1132.89	291.33	180.32	73.75	873.83	2552.14	850.71	792.04	152.11	87.00	50.70	29.00
2-09.0203 FOOD MANAGEMENT, PRODUCTION & SERVICES													
D	T	1300.00		212.46	231.21	3958.30	5701.97	6.00	6.00	77.00	80.00	231.00	240.00
	A	650.00		106.23	115.60	1979.15	2850.99	950.32	950.32	74.05	71.27	24.68	23.76
T	T	1300.00		212.46	231.21	3958.30	5701.97	6.00	6.00	77.00	80.00	231.00	240.00
	A	650.00		106.23	115.60	1979.15	2850.99	950.32	950.32	74.05	71.27	24.68	23.76
2-14.0100 ACCOUNTING & COMPUTING													
A	T	717.00	166.61		10.23	1981.20	2875.04	5.33	5.33	30.00	45.00	79.99	119.98
	A	358.50	83.30		5.11	995.60	1437.52	539.40	539.40	95.83	63.88	35.94	23.96

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment Mid-Term	Enrollment Maximum	Student Credit Hours Mid-Term	Student Credit Hours Maximum
2-14.0100 ACCOUNTING & COMPUTING (cont.)													
B	T	32530.00	8289.96	457.74	6059.96	36926.26	84263.92	120.00	120.00	875.00	1360.00	2625.00	4080.00
	A	813.25	207.24	11.44	151.49	923.15	2106.60	702.19	702.19	96.30	61.95	32.10	20.65
D	T	49750.92	4289.78	208.69	364.86	75241.95	129856.20	179.00	179.00	1472.00	2186.00	4391.00	6528.00
	A	829.18	71.49	3.47	6.08	1254.03	2164.27	725.45	725.45	88.21	59.40	29.57	19.89
T	T	82997.92	12746.35	666.43	6435.05	114149.41	216995.16	312.32	312.32	2438.00	3696.00	7258.64	11007.96
	A	790.45	121.39	6.34	61.28	1087.13	2066.62	694.78	694.78	89.00	58.71	29.89	19.71
2-14.0200 BUSINESS DATA PROCESSING													
A	T	21264.23	2052.72	6188.17	1132.69	30312.36	60950.17	93.32	138.65	459.00	684.00	1223.87	1823.81
	A	607.54	58.64	176.80	32.36	866.06	1741.43	653.13	439.59	132.78	89.10	49.80	33.41
B	T	30441.97	4532.36	145.02	1265.75	18048.13	54433.23	85.00	101.00	358.00	618.00	1283.00	2244.00
	A	951.31	141.63	4.53	39.55	564.00	1701.04	640.39	538.94	152.04	88.07	42.43	24.26
C	T	15506.00	5999.99	3392.32	3463.77	15551.71	43913.79	48.00	50.00	238.00	385.00	878.00	1420.00
	A	1192.76	461.53	260.94	266.44	1196.28	3377.98	914.87	878.27	184.51	114.06	50.02	30.93
D	T	47612.77		455.46	277.74	46060.20	94406.17	130.00	192.00	1070.00	1358.00	2688.00	3334.00
	A	850.22		8.13	4.95	822.50	1685.82	726.20	491.69	88.23	69.51	35.12	28.32
E	T	56520.90	142.65	3049.88		57195.78	116909.21	167.98	277.97	1074.00	1826.00	2943.70	5092.82
	A	942.01	2.37	50.83		953.26	1948.49	695.97	420.58	108.85	64.02	17.64	10.19
T	T	171345.87	13627.72	13230.85	6139.95	167168.18	370612.57	524.30	759.62	3199.00	4871.00	9016.57	13914.63
	A	874.21	69.52	67.50	31.32	852.89	1890.88	706.87	487.89	115.85	76.08	41.10	26.63
2-14.0300 FILING, OFFICE MACHINES, GENERAL OFFICE CLERICAL													
B	T	4026.92		31.39	415.54	2532.09	7005.94	9.00	10.00	60.00	70.00	180.00	210.00
	A	1342.30		10.46	138.51	844.03	2335.31	778.43	700.59	116.76	100.08	38.92	33.36
C	T	2870.00	265.84	75.46	35.63	2178.66	5425.59	9.00	9.00	41.00	60.00	123.00	180.00
	A	956.66	88.61	25.15	11.87	726.22	1808.53	602.84	602.84	132.33	90.42	44.11	30.14

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment Mid-Term	Enrollment Maximum	Student Credit Hours Mid-Term	Student Credit Hours Maximum
2-14.0300 FILING, OFFICE MACHINES, GENERAL OFFICE CLERICAL (cont.)													
D	T	593.74		10.12	39.70	856.78	1500.34	2.00	2.00	50.00	48.00	50.00	48.00
	A	296.87		5.06	19.85	428.39	750.17	750.17	750.17	30.01	31.26	30.01	31.26
E	T	1038.75				1087.96	2126.71	2.66	3.99	21.00	25.00	55.99	66.66
	A	1038.75				1087.96	2126.71	799.51	533.01	101.27	85.06	37.98	31.90
T	T	8529.41	265.84	116.97	490.87	6655.49	16058.58	22.66	24.99	172.00	203.00	408.99	504.66
	A	947.71	29.53	12.99	54.54	739.49	1784.28	708.67	642.60	93.36	79.10	39.26	31.82
2-14.0600 PERSONNEL, TRAINING & RELATED OCCUPATIONS													
B	T	18400.00		219.19	2901.86	17682.38	39203.43	48.00	48.00	419.00	506.00	1257.00	1518.00
	A	1150.00		13.69	181.36	1105.14	2450.21	816.73	816.73	93.56	77.47	31.19	25.83
T	T	18400.00		219.19	2901.86	17682.38	39203.43	48.00	48.00	419.00	506.00	1257.00	1518.00
	A	1150.00		13.69	181.36	1105.14	2450.21	816.73	816.73	93.56	77.47	31.19	25.83
2-14.0700 STENOGRAPHIC, SECRETARIAL, & RELATED OCCUPATIONS													
A	T	5545.45	438.75	648.22	47.90	5217.16	11897.48	18.66	26.66	79.00	140.00	210.64	373.29
	A	792.20	62.67	92.60	6.84	745.30	1699.64	637.59	446.26	150.60	84.98	56.48	31.87
B	T	11652.62		140.20	1856.10	11309.97	24958.89	45.00	51.00	268.00	450.00	804.00	1350.00
	A	776.84		9.34	123.74	753.99	1663.93	554.64	489.39	93.13	55.46	31.04	18.49
C	T	8428.00	447.39	532.68	474.20	5526.35	15408.62	21.00	30.00	104.00	140.00	312.00	420.00
	A	1204.00	63.91	76.09	67.74	789.47	2201.23	733.74	513.62	148.15	110.06	49.39	36.69
D	T	63857.44	1208.54	595.08	2279.46	54353.75	122294.27	191.00	239.00	1163.00	1871.00	3172.00	5215.00
	A	925.47	17.51	8.62	33.03	787.73	1772.38	640.28	511.69	105.15	65.36	38.55	23.45
E	T	28397.45		1379.05		18443.58	48220.08	71.99	91.99	254.00	525.00	949.23	1799.82
	A	1352.25		65.66		878.26	2296.19	669.81	524.18	189.84	91.84	50.79	26.79
T	T	117880.96	2094.68	3295.23	4657.66	94850.81	222779.34	347.65	438.65	1868.00	3126.00	5447.87	9158.11
	A	990.59	17.60	27.69	39.14	797.06	1872.09	640.81	507.87	119.26	71.26	40.89	24.32

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment Mid-Term	Enrollment Maximum	Student Credit Hours Mid-Term	Student Credit Hours Maximum
2-14.0800 SUPERVISORY & ADMINISTRATIVE MANAGEMENT OCCUPATIONS													
A	T	14659.33	1949.42	35.50	290.24	23180.04	40114.53	51.99	39.99	363.00	571.00	935.90	1472.51
	A	698.06	92.82	1.69	13.82	1103.81	1910.22	771.58	1003.11	110.50	70.25	42.86	27.24
B	T	15725.38		201.93	2673.33	16289.74	34890.38	54.00	54.00	386.00	590.00	1158.00	1770.00
	A	873.63		11.21	148.51	904.98	1938.35	646.11	646.11	90.38	59.13	30.13	19.71
C	T	896.00	64.84	18.41	8.69	531.38	1519.32	3.00	3.00	10.00	20.00	30.00	60.00
	A	896.00	64.84	18.41	8.69	531.38	1519.32	506.44	506.44	151.93	75.96	50.64	25.32
D	T	61723.44	11769.86	260.05	871.30	69073.17	143697.82	162.00	160.00	1441.00	2135.00	4031.00	5975.00
	A	1064.19	202.92	4.48	15.02	1190.91	2477.55	887.02	898.11	99.72	67.30	35.65	24.05
E	T	680.00		.75		673.50	1354.25	2.66	2.66	13.00	25.00	34.66	66.66
	A	680.00		.75		673.50	1354.25	509.11	509.11	104.17	54.17	39.07	20.31
T	T	93684.15	13784.12	516.64	3843.56	109747.83	221576.30	273.65	259.65	1827.00	3341.00	6189.56	9344.17
	A	955.96	140.65	5.27	39.22	1119.87	2260.98	809.70	853.36	121.27	66.32	35.79	23.71
2-14.0900 TYPING & RELATED OCCUPATIONS													
B	T	9947.36		109.34	1447.47	8820.09	20324.26	39.00	44.00	209.00	325.00	627.00	975.00
	A	765.18		8.41	88.76	678.46	1563.40	521.13	461.91	97.24	62.53	32.42	20.85
C	T	6372.40	564.09	160.13	75.63	4623.00	11795.25	21.00	21.00	87.00	168.00	261.00	504.00
	A	910.34	80.58	22.87	10.80	660.42	1685.04	561.67	561.67	135.57	70.20	45.19	23.40
E	T	14435.30		759.25		12692.90	27887.45	45.32	56.66	245.00	425.00	653.26	1133.22
	A	849.13		44.66		746.64	1640.44	615.34	492.18	113.82	65.61	42.68	24.60
T	T	30755.06	564.09	1028.72	1523.10	26135.99	60006.96	105.32	121.66	541.00	918.00	1541.26	2612.22
	A	831.21	15.24	27.80	41.16	706.37	1621.80	569.75	493.23	110.91	65.36	38.93	22.97
2-14.9900 OFFICE OCCUPATIONS, OTHER													
A	T	1632.51	199.93	4.15	32.21	2377.44	4246.24	10.66		18.00	40.00	95.99	213.31
	A	816.25	99.96	2.07	16.10	1188.72	2123.12	398.33		235.90	106.15	44.23	19.90

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment		Student Credit Hours	
										Mid-Term	Maximum	Mid-Term	Maximum
2-14.9900 OFFICE OCCUPATIONS, OTHER (cont.)													
B	T	43590.00		498.07	6593.25	40175.75	90857.07	114.00	114.00	952.00	1159.00	2856.00	3477.00
	A	1147.10		13.10	173.50	1057.25	2390.98	796.99	796.99	95.43	78.39	31.81	26.13
T	T	45222.51	199.93	502.22	6625.46	42553.19	95103.31	124.66	114.00	970.00	1199.00	2951.99	3690.31
	A	1130.56	4.99	12.55	165.63	1063.82	2377.58	762.90	834.23	98.04	79.31	32.21	25.77
2-16.0103 ARCHITECTURAL TECHNOLOGY (BUILDING CONSTRUCTION)													
A	T	15576.38	1263.99	1797.19	126.52	14792.96	33557.04	42.66	71.32	224.00	380.00	597.27	1013.23
	A	973.52	78.99	112.32	7.90	924.56	2097.32	786.61	470.51	149.80	88.30	56.18	33.11
D	T	19966.84		1541.61	1243.49	10846.77	33598.71	34.00	75.00	241.00	312.00	633.00	816.00
	A	1426.20		110.11	88.82	774.76	2399.91	988.19	447.98	139.41	107.68	53.08	51.17
T	T	35543.22	1263.99	3338.80	1370.01	25639.73	67155.75	76.66	146.32	465.00	692.00	1230.27	1829.23
	A	1184.77	42.13	111.29	45.66	854.65	2238.52	862.97	458.96	144.42	97.04	54.58	36.71
2-16.0104 AUTOMOTIVE TECHNOLOGY													
B	T	17700.00		2298.49		7174.25	27172.74	32.00	54.00	142.00	150.00	510.00	530.00
	A	1041.17		135.20		422.01	1598.40	849.14	503.19	191.35	181.15	53.28	51.27
C	T	5018.94		1990.60	60.30	4676.14	11745.98	18.00	18.00	58.00	100.00	264.00	450.00
	A	1254.73		497.65	15.07	1169.03	2936.50	652.55	652.55	202.51	117.45	44.49	26.10
D	T	24717.48		983.04	147.89	5877.47	31725.88	39.00	72.00	116.00	172.00	343.00	508.00
	A	1177.02		46.81	7.04	279.87	1510.76	813.48	440.63	273.49	184.45	92.50	62.45
T	T	47436.42		5272.13	208.19	17727.86	70644.60	89.00	111.00	316.00	422.00	1117.00	1488.00
	A	1129.43		125.52	4.95	422.09	1682.01	793.75	636.43	223.55	167.40	63.24	47.47
2-16.0105 CHEMICAL TECHNOLOGY													
D	T	8566.14		2454.00	7.00	2176.20	13203.34	22.00	42.00	40.00	168.00	127.00	528.00
	A	1070.76		306.75	.87	272.02	1650.42	600.15	314.36	330.08	78.59	103.96	25.01

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment Mid-Term	Enrollment Maximum	Student Credit Hours Mid-Term	Student Credit Hours Maximum
2-16.0105 CHEMICAL TECHNOLOGY (cont.)													
T	T	8566.14		2454.00	7.00	2176.20	13203.34	22.00	42.00	40.00	168.00	127.00	528.00
	A	1070.76		306.75	.87	272.02	1650.42	600.15	314.36	330.08	78.59	103.96	25.01
2-16.0106 CIVIL TECHNOLOGY													
A	T	7790.14	95.16	1273.54	745.84	4886.96	14791.64	21.33	29.99	74.00	140.00	197.31	373.29
	A	973.76	11.89	159.19	93.23	610.87	1848.96	693.46	493.21	199.88	105.65	74.96	39.62
D	T	6719.56		820.78	205.64	2621.73	10367.71	16.00	30.00	60.00	120.00	153.00	320.00
	A	1119.92		136.79	34.27	436.95	1727.95	647.98	345.59	172.79	86.39	67.76	32.40
E	T	6314.88		325.16		1968.70	8608.74	7.99	15.99	38.00	60.00	101.32	159.98
	A	2104.96		108.38		656.23	2869.58	1077.43	538.38	226.54	143.48	37.75	23.91
T	T	20824.58	95.16	2419.48	951.48	9477.39	33768.09	45.32	75.98	172.00	320.00	451.63	853.27
	A	1224.97	5.59	142.32	55.96	557.49	1986.35	745.10	444.43	196.32	105.52	74.76	39.57
2-16.0107 ELECTRICAL TECHNOLOGY													
A	T	1125.00	730.88	423.71	136.68	4226.56	6642.83	7.99	7.99	64.00	60.00	170.64	159.98
	A	375.00	243.62	141.23	45.56	1408.85	2214.28	831.39	831.39	103.79	110.71	38.92	41.52
B	T	1678.26		322.55	26.96	1406.72	3434.49	8.00	10.00	25.00	56.00	100.00	224.00
	A	839.13		161.27	13.48	703.36	1717.25	429.31	343.44	137.37	61.33	34.34	15.33
T	T	2803.26	730.88	746.26	163.64	5633.28	10077.32	15.99	17.99	89.00	116.00	270.64	383.98
	A	560.65	146.17	149.25	32.72	1126.65	2015.46	630.22	560.16	113.22	86.87	37.23	26.24
2-16.0108 ELECTRONIC TECHNOLOGY													
A	T	19098.96	181.22	1264.46	407.88	12613.64	35566.16	48.66	81.32	189.00	372.00	509.28	1007.89
	A	1061.05	121.17	70.24	22.66	700.75	1975.90	730.91	437.36	188.18	95.60	69.83	35.28
B	T	17752.93		1422.44	118.90	6203.61	25497.88	39.00	70.50	112.00	280.00	441.00	1092.00
	A	710.11		56.89	4.75	248.14	1019.92	653.79	361.67	227.65	91.06	57.82	23.35

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment Mid-Term	Enrollment Maximum	Student Credit Hours Mid-Term	Student Credit Hours Maximum
2-16.0108 ELECTRONIC TECHNOLOGY (cont.)													
C	T	1226.00		452.41	13.71	1062.76	2754.88	4.00	4.00	15.00	25.00	60.00	100.00
	A	1226.00		452.41	13.71	1062.76	2754.88	688.72	688.72	183.65	110.19	45.91	27.55
D	T	40404.95	2642.85	1321.17	221.30	11926.30	56516.57	72.00	115.00	186.00	324.00	696.00	1260.00
	A	1683.53	110.11	55.04	9.22	496.92	2354.86	784.95	491.44	303.85	174.43	81.20	44.85
E	T	34422.62		3485.13		13910.38	51818.13	59.99	101.98	296.00	500.00	715.92	1199.88
	A	1376.90		139.40		556.41	2072.73	863.77	508.12	175.06	103.63	72.37	43.18
T	T	112905.46	4824.07	7945.61	761.79	45716.69	172153.62	223.65	372.80	798.00	1501.00	2422.20	4659.77
	A	1214.03	51.87	85.43	8.19	491.57	1851.11	769.74	461.78	215.73	114.69	71.07	36.94
2-16.0111 INDUSTRIAL TECHNOLOGY													
A	T	5194.52	1186.38	107.52	13.31	6405.88	12907.61	15.99	15.99	97.00	158.00	258.64	421.29
	A	865.75	197.73	17.92	2.21	67.64	2151.27	807.23	807.23	133.06	81.69	49.90	30.63
D	T	4440.30		23.04	6.96	616.89	5087.19	9.00	19.00	12.00	60.00	36.00	180.00
	A	1480.10		7.68	2.32	205.63	1695.73	565.24	267.76	423.93	84.78	141.31	28.26
T	T	9634.82	1186.38	130.56	20.27	7022.77	17994.80	24.99	34.99	109.00	218.00	294.64	601.29
	A	1070.53	131.82	14.50	2.25	780.30	1999.42	720.08	514.28	165.08	82.54	61.07	29.92
2-16.0112 INSTRUMENTATION TECHNOLOGY													
E	T	10560.00		1621.48		6786.81	18968.29	45.32	90.65	103.00	210.00	349.29	679.93
	A	754.28		115.82		484.77	1354.88	418.54	209.24	184.15	90.32	54.30	27.89
T	T	10560.00		1621.48		6786.81	18968.29	45.32	90.65	103.00	210.00	349.29	679.93
	A	754.28		115.82		484.77	1354.88	418.54	209.24	184.15	90.32	54.30	27.89
2-16.0113 MECHANICAL TECHNOLOGY													
A	T	6849.59	467.41	694.80	48.80	5613.40	13674.00	18.66	34.66	85.00	165.00	226.64	439.95
	A	978.51	66.77	99.25	6.97	801.91	1953.43	732.79	394.51	160.87	82.87	60.33	31.08

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment		Student Credit Hours	
										Mid-Term	Maximum	Mid-Term	Maximum
2-16.0113 MECHANICAL TECHNOLOGY (cont.)													
B	T	34658.32		3502.39	540.48	16711.77	55412.96	68.00	98.50	311.00	383.00	1188.00	1402.00
	A	888.67		89.80	13.85	428.50	1420.85	814.89	562.56	178.17	144.68	46.64	39.52
D	T	61528.28		6576.57	1127.04	22498.91	91730.80	114.00	205.00	464.00	817.00	1313.00	2383.00
	A	1367.29		146.14	25.04	499.97	2038.46	804.65	447.46	197.69	112.27	69.86	38.49
E	T	12259.84		656.02		2745.81	15661.67	23.99	47.99	53.00	180.00	141.31	479.95
	A	1362.20		72.89		305.09	1740.19	652.84	326.35	295.50	87.00	110.83	32.63
T	T	115296.03	467.41	11429.78	1716.32	47569.89	176479.43	224.65	386.15	913.00	1545.00	2868.95	4704.90
	A	1152.96	4.67	114.29	17.16	475.69	1764.79	785.57	457.02	193.29	114.22	61.51	37.50
2-16.0115 NUCLEAR TECHNOLOGY													
A	T	7498.70	1137.44	103.07	12.75	6141.72	14893.68	15.99	21.33	93.00	159.00	247.97	423.95
	A	1249.78	189.57	17.17	2.12	1023.62	2482.28	931.43	698.25	160.14	93.67	60.06	35.13
T	T	7498.70	1137.44	103.07	12.75	6141.72	14893.68	15.99	21.33	93.00	159.00	247.97	423.95
	A	1249.78	189.57	17.17	2.12	1023.62	2482.28	931.43	698.25	160.14	93.67	60.06	35.13
2-16.0199 ENGINEERING RELATED TECHNOLOGY, OTHER													
D	T	8811.30		672.17	542.19	4729.39	14755.05	15.00	21.00	92.00	153.00	276.00	459.00
	A	1762.26		134.43	108.43	945.87	2951.01	983.67	702.62	160.38	96.43	53.46	32.15
E	T	11312.00		2359.29		6631.39	20302.68	23.99	47.99	128.00	180.00	341.29	479.95
	A	1256.88		262.14		736.82	2255.85	846.29	423.06	158.61	112.79	59.48	42.30
T	T	20123.30		3031.46	542.19	11360.78	35057.73	38.99	68.99	220.00	333.00	617.29	938.95
	A	1437.37		216.53	38.72	811.48	2504.12	899.14	508.15	159.35	105.27	56.79	37.33
2-16.0699 MISCELLANEOUS TECHNICAL EDUCATION, OTHER													
A	T	13517.62	4109.49	372.40	46.10	22189.45	40235.06	49.99	49.99	378.00	618.00	895.91	1479.85
	A	643.69	195.69	17.73	2.19	1056.64	1915.96	804.86	804.86	106.44	65.10	44.90	27.18

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment		Student Credit Hours	
										Mid-Term	Maximum	Mid-Term	Maximum
2-16.0699 MISCELLANEOUS TECHNICAL EDUCATION, OTHER (cont.)													
D	T	69158.36		4760.66	317.90	61225.13	135462.05	190.00	230.00	1022.00	1524.00	3573.00	5340.00
	A	1047.85		72.13	4.81	927.65	2052.46	712.95	588.96	132.54	88.88	37.91	25.37
E	T	1777.67		99.02		414.46	2291.15	2.66	5.33	8.00	24.00	21.33	63.99
	A	1777.67		99.02		414.46	2291.15	861.33	429.85	286.39	95.46	107.41	35.80
T	T	84453.65	4109.49	5232.08	364.00	83829.04	177988.26	242.65	285.32	1408.00	2166.00	4490.24	6883.84
	A	959.70	46.69	59.45	4.13	952.60	2022.59	733.51	623.81	126.41	82.17	39.63	25.85
2-17.0100 AIR CONDITIONING													
C	T	2100.00		3145.84	86.61	2621.48	7953.93	8.00	8.00	37.00	50.00	148.00	200.00
	A	1050.00		1572.92	43.30	1310.74	3976.97	994.24	994.24	214.97	159.07	53.74	39.77
T	T	2100.00		3145.84	86.61	2621.48	7953.93	8.00	8.00	37.00	50.00	148.00	200.00
	A	1050.00		1572.92	43.30	1310.74	3976.97	994.24	994.24	214.97	159.07	53.74	39.77
2-17.0300 AUTOMOTIVE SERVICES													
E	T	449.86	686.37	124.64		880.73	2141.60	2.66	2.66	17.00	23.00	45.32	61.32
	A	449.86	686.37	124.64		880.73	2141.60	805.11	805.11	125.97	93.11	47.25	34.92
T	T	449.86	686.37	124.64		880.73	2141.60	2.66	2.66	17.00	23.00	45.32	61.32
	A	449.86	686.37	124.64		880.73	2141.60	805.11	805.11	125.97	93.11	47.25	34.92
2-17.0302 AUTO MECHANICS													
A	T	16592.06	464.86	2340.79	221.63	14462.76	34082.10	50.66	73.32	114.00	200.00	583.94	1013.23
	A	1659.20	46.48	234.07	22.16	1446.27	3408.21	672.76	464.84	298.96	170.41	58.36	33.63
D	T	19847.96		1788.33	269.09	10692.56	32597.86	44.00	137.50	117.00	168.00	624.00	822.00
	A	1417.71		127.73	19.21	763.75	2328.42	740.86	237.07	278.61	194.03	52.24	39.66
E	T	26236.10	8599.81	2221.61		15697.75	52755.27	98.65	185.31	289.00	576.00	807.91	1855.81
	A	846.32	277.41	71.66		506.37	1701.78	534.77	284.68	182.54	91.58	65.29	28.42

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment		Student Credit Hours	
										Mid-Term	Maximum	Mid-Term	Maximum
2-17.0302 AUTO MECHANICS (cont.)													
T	T	62676.12	9064.67	6350.73	490.64	40853.07	119435.23	193.31	396.13	520.00	944.00	2015.85	3691.04
	A	1139.56	164.81	115.46	8.92	742.78	2171.54	617.84	301.50	229.68	126.52	59.24	32.35
2-17.0700 COMMERCIAL ART OCCUPATIONS													
D	T	10176.00		179.71	102.26	5963.16	16421.13	24.00	48.00	116.00	192.00	348.00	576.00
	A	1272.00		22.46	12.78	745.39	2052.64	684.21	342.10	141.56	85.52	47.19	28.51
T	T	10176.00		179.71	102.26	5963.16	16421.13	24.00	48.00	116.00	192.00	348.00	576.00
	A	1272.00		22.46	12.78	745.39	2052.64	684.21	342.10	141.56	85.52	47.19	28.51
2-17.1001 CARPENTRY													
D	T	4956.00				6819.93	11775.93	21.00	35.00	217.00	286.00	398.00	506.00
	A	413.00				568.32	981.33	560.75	336.45	54.26	41.17	29.59	23.27
T	T	4956.00				6819.93	11775.93	21.00	35.00	217.00	286.00	398.00	506.00
	A	413.00				568.32	981.33	560.75	336.45	54.26	41.17	29.59	23.27
2-17.1004 MASONRY													
A	T	4975.68	560.64	724.76	5.11	1651.00	7917.19	10.66	15.99	25.00	75.00	66.66	199.98
	A	1243.92	140.16	181.19	1.27	412.75	1979.30	742.70	495.13	316.68	105.56	118.76	39.58
D	T	1070.00				1285.16	2355.16	5.00	7.00	30.00	48.00	75.00	120.00
	A	535.00				642.58	1177.58	471.03	336.45	78.50	49.06	31.40	19.63
E	T	2156.50		61.89		259.04	2477.43	2.66	5.33	5.00	24.00	13.33	63.99
	A	2156.50		61.89		259.04	2477.43	931.36	464.80	495.48	103.22	185.85	38.71
T	T	9202.18	560.64	786.65	5.11	3195.20	12749.78	18.32	28.32	60.00	147.00	154.99	383.97
	A	1314.59	80.09	112.37	.73	456.45	1821.39	695.94	450.20	212.49	86.73	82.26	33.20

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment Mid-Term	Enrollment Maximum	Student Credit Hours Mid-Term	Student Credit Hours Maximum
2-17.1300 DRAFTING													
C	T	2905.78		663.54	20.10	1558.72	5148.14	8.00	11.00	22.00	50.00	88.00	200.00
	A	1452.89		331.77	10.05	779.36	2574.07	643.51	468.01	234.00	102.96	58.50	25.74
E	T	5790.00		718.85		2020.51	8529.36	10.66	18.66	39.00	80.00	103.98	213.31
	A	1447.50		179.71		505.12	2132.34	800.12	457.09	218.70	106.61	82.02	39.98
T	T	8695.78		1382.39	20.10	3579.23	13677.50	18.66	29.66	61.00	130.00	191.98	413.31
	A	1449.29		230.39	3.35	596.53	2279.58	732.98	461.14	224.22	105.21	71.24	33.09
2-17.1500 ELECTRONIC OCCUPATIONS													
D	T	16005.85		1034.52	173.29	9338.84	26552.50	50.00	73.00	114.00	198.00	545.00	900.00
	A	1143.27		73.89	12.37	667.06	1896.61	531.05	363.73	232.91	134.10	48.72	29.50
T	T	16005.85		1034.52	173.29	9338.84	26552.50	50.00	73.00	114.00	198.00	545.00	900.00
	A	1143.27		73.89	12.37	667.06	1896.61	531.05	363.73	232.91	134.10	48.72	29.50
2-17.1503 RADIO/TELEVISION REPAIR													
A	T	4866.74		475.48	41.42	1254.76	6638.40	13.33	13.33	19.00	85.00	76.00	226.64
	A	973.34		95.09	8.28	250.95	1327.68	498.00	498.00	349.38	78.09	87.34	29.29
E	T	7039.39		973.50		3885.58	11898.47	15.99	31.99	75.00	120.00	199.98	319.96
	A	1173.23		162.25		647.59	1983.08	744.11	371.94	158.64	99.15	59.49	37.18
T	T	11906.13		1448.98	41.42	5140.34	18536.87	29.32	45.32	94.00	205.00	275.98	546.60
	A	1082.37		131.72	3.76	467.30	1685.17	632.22	409.02	197.20	90.42	67.16	33.91
2-17.2100 INSTRUMENT MAINTENANCE & REPAIR													
E	T	5970.00		297.07		1243.39	7510.46	26.66	53.32	12.00	75.00	63.99	399.96
	A	1194.00		59.41		248.67	1502.09	281.71	140.85	625.87	100.13	117.36	18.77
T	T	5970.00		297.07		1243.39	7510.46	26.66	53.32	12.00	75.00	63.99	399.96
	A	1194.00		59.41		248.67	1502.09	281.71	140.85	625.87	100.13	117.36	18.77

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment		Student Credit Hours	
										Mid-Term	Maximum	Mid-Term	Maximum
2-17.2302 MACHINE SHOP													
A	T	6354.40	1073.14	533.06	13.17	6670.04	14643.81	39.99	59.99	57.00	113.00	269.30	562.61
	A	794.30	134.14	66.63	1.64	833.75	1830.48	366.18	244.10	256.90	129.59	54.37	26.02
D	T	2285.00		979.12	170.80	3084.39	6519.31	10.00	14.00	79.00	80.00	180.00	190.00
	A	571.25		244.78	42.70	771.09	1629.83	651.93	465.66	82.52	81.49	36.22	34.31
T	T	8639.40	1073.14	1512.18	183.97	9754.43	21163.12	49.99	73.99	136.00	193.00	449.30	752.61
	A	719.95	89.42	126.01	15.33	812.86	1763.59	423.34	286.02	155.61	109.65	47.10	28.11
2-17.2306 WELDING & CUTTING													
A	T	4112.00		1057.97	10.96	4754.88	9935.81	23.99	50.66	67.00	141.00	191.98	418.62
	A	514.00		132.24	1.37	594.36	1241.98	414.16	196.12	148.29	70.46	51.75	23.73
C	T	630.00		241.29	7.31	566.81	1445.41	2.00	5.00	16.00	20.00	32.00	40.00
	A	630.00		241.29	7.31	566.81	1445.41	722.70	289.08	90.33	72.27	45.17	36.14
E	T	5385.00	3674.08	667.22		4714.50	14440.80	23.99	47.99	91.00	162.00	242.64	431.95
	A	598.33	408.23	74.13		523.83	1604.53	601.95	300.91	158.69	89.14	59.51	33.43
T	T	10127.00	3674.08	1966.48	18.27	10036.19	25822.02	49.98	103.65	174.00	323.00	466.62	890.57
	A	562.61	204.11	109.24	1.01	557.56	1434.55	516.64	249.12	148.40	79.94	55.33	28.99
2-17.2602 COSMETOLOGY													
A	T	12456.32	89.67	5071.99	411.39	9707.89	27737.26	55.99	167.98	49.00	110.00	391.96	879.91
	A	1779.47	12.81	724.57	58.77	1386.84	3962.47	495.39	165.12	566.06	252.15	70.76	31.52
T	T	12456.32	89.67	5071.99	411.39	9707.89	27737.26	55.99	167.98	49.00	110.00	391.96	879.91
	A	1779.47	12.81	724.57	58.77	1386.84	3962.47	495.39	165.12	566.06	252.15	70.76	31.52
2-17.2802 LAW ENFORCEMENT TRAINING													
B	T	15850.00		3754.47	313.83	16374.16	36292.46	57.00	57.00	388.00	660.00	1164.00	1980.00
	A	834.21		197.60	16.51	861.79	1910.13	636.70	636.70	93.53	54.98	31.18	18.33

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment Mid-Term	Enrollment Maximum	Student Credit Hours Mid-Term	Student Credit Hours Maximum
2-17.2802 LAW ENFORCEMENT TRAINING (cont.)													
D	T	20342.00	2138.01	297.83	797.19	13759.81	37334.84	52.00	56.00	255.00	525.00	803.00	1635.00
	A	1130.11	118.77	16.54	44.28	764.43	2074.16	717.97	666.69	146.41	71.11	46.49	22.83
T	T	36192.00	2138.01	4052.30	1111.02	30133.97	73627.30	109.00	113.00	643.00	1185.00	1967.00	3615.00
	A	978.16	57.78	109.52	30.02	814.43	1989.92	675.47	651.56	114.50	62.13	37.43	20.36
2-17.3000 REFRIGERATION													
E	T	1092.84	928.62	168.63		1191.57	3381.66	5.33	7.99	23.00	40.00	61.32	106.65
	A	546.42	464.31	84.31		595.78	1690.83	634.45	423.23	147.02	84.54	55.14	31.70
T	T	1092.84	928.62	168.63		1191.57	3381.66	5.33	7.99	23.00	40.00	61.32	106.65
	A	546.42	464.31	84.31		595.78	1690.83	634.45	423.23	147.02	84.54	55.14	31.70
2-17.3100 SMALL ENGINE REPAIR--INTERNAL COMBUSTION													
E	T	3429.16	3351.10	608.56		4300.05	11688.87	13.33	19.99	83.00	100.00	221.31	266.64
	A	685.83	670.22	121.71		860.01	2337.77	876.88	584.73	140.82	116.88	52.81	43.83
T	T	3429.16	3351.10	608.56		4300.05	11688.87	13.33	19.99	83.00	100.00	221.31	266.64
	A	685.83	670.22	121.71		860.01	2337.77	876.88	584.73	140.82	116.88	52.81	43.83
2-17.9900 TRADE & INDUSTRIAL OCCUPATIONS, OTHER													
D	T	1298.68		164.95	10.78	2107.66	3582.07	6.00	6.00	41.00	60.00	123.00	180.00
	A	649.34		82.47	5.39	1053.83	1791.04	597.01	597.01	87.36	59.70	29.12	19.90
T	T	1298.68		164.95	10.78	2107.66	3582.07	6.00	6.00	41.00	60.00	123.00	180.00
	A	649.34		82.47	5.39	1053.83	1791.04	597.01	597.01	87.36	59.70	29.12	19.90
2-30.0000 GENERAL EDUCATION													
A	T	2305.44	338.79	7.03	54.58	4028.44	6734.28	7.99	7.99	61.00	105.00	162.65	279.97
	A	768.48	112.93	2.34	18.19	1342.81	2244.76	842.83	842.83	110.39	64.13	41.40	24.05

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment		Student Credit Hours	
										Mid-Term	Maximum	Mid-Term	Maximum
2-30.0000 GENERAL EDUCATION (cont.)													
B	T	8813.93		367.43	28.58	6217.68	15427.62	27.00	29.00	218.00	370.00	442.00	750.00
	A	677.99		28.26	2.19	478.28	1186.74	571.39	531.98	70.76	41.69	34.00	20.57
C	T	3162.59		1063.17	32.21	2497.49	6755.46	9.00	9.00	47.00	102.00	141.00	306.00
	A	1054.19		354.39	10.73	832.49	2251.82	750.60	750.60	143.73	66.23	47.91	22.08
E	T	117616.51	2984.57	3322.83		108278.28	232202.19	354.63	410.62	2090.00	3407.00	5572.77	9084.42
	A	884.33	22.44	24.98		814.12	1745.88	654.77	565.49	111.10	68.15	41.66	25.56
T	T	131898.47	3323.36	4760.46	115.37	121021.89	261119.55	398.62	456.61	2416.00	3984.00	6318.42	10420.39
	A	867.75	21.86	31.31	.75	796.19	1717.89	655.05	571.86	108.07	65.54	41.32	25.05

GENERAL STUDIES

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment Mid-Term	Enrollment Maximum	Student Credit Hours Mid-Term	Student Credit Hours Maximum
3030100 BIOLOGICAL SCIENCE													
A	T	646.57		21.97	.90	462.28	1131.72	2.66	3.99	7.00	24.00	18.66	63.99
	A	646.57		21.97	.90	462.28	1131.72	425.45	283.63	161.67	47.15	60.64	17.68
T	T	646.57		21.97	.90	462.28	1131.72	2.66	3.99	7.00	24.00	18.66	63.99
	A	646.57		21.97	.90	462.28	1131.72	425.45	283.63	161.67	47.15	60.64	17.68
3030200 MATHEMATICAL SCIENCE													
A	T	7916.30	186.14	162.92		10302.24	18567.60	26.66	26.66	156.00	345.00	415.95	919.90
	A	791.63	18.61	16.29		1030.22	1856.76	696.45	696.45	119.02	53.81	44.63	20.18
B	T	17457.44	508.28	46.80		8018.26	26030.78	30.00	50.00	190.00	258.00	570.00	774.00
	A	1745.74	50.82	4.68		801.82	2603.08	867.69	520.61	137.00	100.89	45.67	33.63
D	T	40849.83	5041.48	409.80	233.43	43027.26	89561.80	118.00	118.00	534.00	750.00	2511.00	3540.00
	A	1633.99	201.65	16.39	9.33	1721.09	3582.47	758.99	758.99	167.71	119.41	35.67	25.30
E	T	9596.94	161.02	4.31		7719.37	17481.64	31.99	31.99	149.00	360.00	397.29	959.90
	A	799.74	13.41	.35		643.28	1456.80	546.47	546.47	117.32	48.56	44.00	18.21

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment		Student Credit Hours	
										Mid-Term	Maximum	Mid-Term	Maximum
3030200 MATHEMATICAL SCIENCE (cont.)													
T	T	75820.51	5896.92	623.83	233.43	69067.13	151641.82	206.65	226.65	1029.00	1713.00	3894.24	6193.80
	A	1330.18	103.45	10.94	4.09	1211.70	2660.38	733.80	669.05	147.36	88.52	38.94	24.48
3030400 SOCIAL SCIENCE													
D	T	21924.87	543.38	279.33	53.62	13794.07	36595.27	65.00	76.00	343.00	569.00	805.00	1357.00
	A	812.03	20.12	10.34	1.98	510.89	1355.38	563.00	481.51	106.69	64.31	45.46	26.97
T	T	21924.87	543.38	279.33	53.62	13794.07	36595.27	65.00	76.00	343.00	569.00	805.00	1357.00
	A	812.03	20.12	10.34	1.98	510.89	1355.38	563.00	481.51	106.69	64.31	45.46	26.97
3030500 HUMANITIES													
A	T	6293.09	530.95	236.19	87.28	15915.64	23063.15	31.99	31.99	241.00	310.00	642.60	826.58
	A	524.42	44.24	19.68	7.27	1326.30	1921.93	720.94	720.94	95.69	74.39	35.89	27.90
T	T	6293.09	530.95	236.19	87.28	15915.64	23063.15	31.99	31.99	241.00	310.00	642.60	826.58
	A	524.42	44.24	19.68	7.27	1326.30	1921.93	720.94	720.94	95.69	74.39	35.89	27.90
3030600 BUSINESS													
D	T	1585.20	185.09	3.12	3.94	873.91	2651.26	6.00	6.00	17.00	60.00	51.00	180.00
	A	792.60	92.54	1.56	1.97	436.95	1325.63	441.87	441.87	155.95	44.18	51.99	14.73
T	T	1585.20	185.09	3.12	3.94	873.91	2651.26	6.00	6.00	17.00	60.00	51.00	180.00
	A	792.60	92.54	1.56	1.97	436.95	1325.63	441.87	441.87	155.95	44.18	51.99	14.73
3030700 READING													
A	T	13270.00	568.53	104.57	173.85	9080.50	23197.45	18.66	37.32	275.00	310.00	366.63	826.58
	A	1105.83	47.37	8.71	14.48	756.70	1656.96	1243.16	621.58	84.35	74.83	63.27	28.06
B	T	21550.03		44.97		8327.74	29922.74	36.50	42.00	321.00	400.00	592.00	730.00
	A	1077.50		2.24		416.38	1496.14	819.80	712.44	93.21	74.80	50.55	40.99

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment		Student Credit Hours	
										Mid-Term	Maximum	Mid-Term	Maximum
3030700 READING (cont.)													
D	T	33360.87		133.73	113.15	9578.76	43186.51	51.00	83.00	348.00	480.00	559.00	765.00
	A	1042.52		4.17	3.53	299.33	1349.58	846.79	520.31	124.09	89.97	77.26	56.45
E	T	15057.09	117.77	77.52		12485.67	27738.05	47.99	47.99	241.00	328.00	642.60	874.57
	A	836.50	6.54	4.30		693.64	1541.00	577.99	577.99	115.09	84.56	43.16	31.71
T	T	83237.99	686.30	360.79	287.00	39472.67	124044.75	154.15	210.31	1185.00	1518.00	2160.23	3196.15
	A	1015.09	8.36	4.39	3.50	481.37	1512.74	804.70	589.81	104.67	81.71	57.42	38.81
3030800 ENGLISH													
A	T	21698.70	2447.84	450.25	748.54	39095.68	64441.01	85.32	85.32	592.00	825.00	1578.50	2199.78
	A	678.08	76.49	14.07	23.39	1221.74	2013.78	755.28	755.28	108.85	78.11	40.82	29.29
B	T	15375.00		41.47		7680.66	23097.13	33.00	33.00	182.00	220.00	546.00	660.00
	A	768.75		2.07		384.03	2099.74	699.91	699.91	126.90	104.98	42.30	35.00
C	T	3080.00		8.90	8.60	5101.25	8198.75	12.00	12.00	96.00	112.00	288.00	336.00
	A	770.00		2.22	2.15	1275.31	2049.69	683.22	682.22	85.40	73.20	28.47	24.40
D	T	60654.79	5128.88	665.30	563.02	47653.84	114665.83	156.00	156.00	927.00	1140.00	2781.00	3420.00
	A	1166.43	98.63	12.79	10.82	916.42	2205.11	735.03	735.03	123.69	100.58	41.23	33.53
E	T	12268.11	86.96	57.25		9221.78	21634.10	39.99	39.99	178.00	330.00	474.61	879.91
	A	817.87	5.79	3.81		614.78	1442.27	540.98	540.98	121.53	65.55	45.58	24.58
T	T	113076.60	7663.68	1223.17	1320.16	108753.21	232036.82	326.31	326.31	1975.00	2627.00	5668.11	7495.69
	A	919.32	62.30	9.94	10.73	884.17	1886.47	711.09	711.09	117.48	88.32	40.93	30.95

ADULT & CONTINUING EDUCATION

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment Mid-Term	Enrollment Maximum	Student Credit Hours Mid-Term	Student Credit Hours Maximum
4040100 AGRICULTURAL SCIENCES													
C	T	1042.04		39.53	9.41	141.70	1232.68	2.00	2.00	4.00	25.00	8.00	50.00
	A	1042.04		39.53	9.41	141.70	1232.68	616.34	616.34	308.17	49.30	154.09	24.65

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Cost	Credit Hours	Contact Hours	Enrollment Mid-Term	Enrollment Maximum	Student Credit Hours Mid-Term	Student Credit Hours Maximum
4040100 AGRICULTURAL SCIENCES (cont.)													
T	T	1042.04		39.53	9.41	141.70	1232.68	2.00	2.00	4.00	25.00	8.00	50.00
	A	1042.04		39.53	9.41	141.70	1232.68	616.34	616.34	308.17	49.30	154.09	24.65
4040200 BIOLOGICAL SCIENCES													
C	T	735.00	80.41	110.44	4.98	850.21	1781.04	3.00	3.33	16.00	28.00	48.00	84.00
	A	735.00	80.41	110.44	4.98	850.21	1781.04	593.68	534.84	111.31	63.60	37.11	21.20
T	T	735.00	80.41	110.44	4.98	850.21	1781.04	3.00	3.33	16.00	28.00	48.00	84.00
	A	735.00	80.41	110.44	4.98	850.21	1781.04	593.68	534.84	111.31	63.60	37.11	21.20
4040500 SOCIAL SCIENCES													
D	T	1539.08	145.32	40.97	5.74	1473.64	3204.75	7.00	6.50	82.00	198.00	86.00	233.00
	A	256.51	24.22	6.82	.95	245.60	534.13	457.82	493.03	39.08	16.18	37.26	13.75
T	T	1539.08	145.32	40.97	5.74	1473.64	3204.75	7.00	6.50	82.00	198.00	86.00	233.00
	A	256.51	24.22	6.82	.95	245.60	534.13	457.82	493.03	39.08	16.18	37.26	13.75
4040600 HUMANITIES													
B	T	550.00		14.06		422.02	986.08	3.00	4.00	20.00	48.00	30.00	72.00
	A	275.00		7.03		211.01	493.04	328.69	246.52	49.30	20.54	32.87	13.70
D	T	3414.44	360.54	45.80	42.57	3478.51	7341.86	12.00	12.25	95.00	145.00	203.00	265.00
	A	569.07	60.09	7.63	7.09	579.75	1223.64	611.82	599.33	77.28	50.63	36.17	27.71
T	T	3964.44	360.54	59.86	42.57	3900.53	8327.94	15.00	16.25	115.00	193.00	233.00	337.00
	A	495.55	45.06	7.48	5.32	487.56	1040.99	555.19	512.48	72.41	43.14	35.74	24.71
4040700 FINE ARTS													
C	T	8586.92		347.78	13.50	8785.47	17733.67	20.00	30.00	248.00	240.00	496.00	480.00
	A	858.69		34.77	1.35	878.54	1773.36	886.68	591.12	71.50	73.89	35.75	36.95

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Instituional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment Mid-Term	Enrollment Maximum	Student Credit Hours Mid-Term	Student Credit Hours Maximum
4040700 FINE ARTS (cont.)													
D	T	2277.00	530.64	215.04	178.87	6185.93	9387.48	19.00	22.50	307.00	332.00	361.00	372.00
	A	151.80	35.37	14.33	11.92	412.39	625.83	494.07	417.22	30.57	28.27	26.00	25.24
T	T	10863.92	530.64	562.82	192.37	14971.40	27121.15	39.00	52.50	555.00	572.00	857.00	852.00
	A	434.55	21.22	22.51	7.69	598.85	1084.84	695.41	516.59	48.86	47.41	31.64	31.83
4040800 ARCHITECTURE													
D	T	575.00		80.37	64.83	565.47	1285.67	3.00	3.00	11.00	24.00	33.00	72.00
	A	575.00		80.37	64.83	565.47	1285.67	428.55	428.55	116.87	53.56	38.96	17.86
T	T	575.00		80.37	64.83	565.47	1285.67	3.00	3.00	11.00	24.00	33.00	72.00
	A	575.00		80.37	64.83	565.47	1285.67	428.55	428.55	116.87	53.56	38.96	17.86
4040900 BUSINESS													
B	T	4400.00	684.02	54.57	564.71	5429.92	11133.22	22.00	25.00	157.00	315.00	386.00	710.00
	A	488.88	76.00	6.06	62.74	603.32	1237.02	506.05	445.32	70.91	35.34	28.84	15.68
C	T	420.00	97.26	27.61	13.03	797.07	1354.97	2.00	2.00	45.00	50.00	45.00	50.00
	A	210.00	48.63	13.80	6.51	393.53	677.49	677.49	677.49	30.11	27.10	30.11	27.10
D	T	3473.73	1270.23	47.27	120.30	8233.61	13145.14	21.50	21.50	412.00	567.00	480.50	643.00
	A	182.82	66.85	2.48	6.33	433.34	691.85	611.40	611.40	31.90	23.18	27.36	20.44
T	T	8293.73	2051.51	129.45	698.04	14460.60	25633.33	45.50	48.50	614.00	932.00	911.50	1403.00
	A	276.45	68.38	4.31	23.26	482.02	854.44	563.36	528.52	41.74	27.50	28.12	18.27
4041000 OFFICE OCCUPATIONS													
C	T	1260.00	220.45	62.58	29.56	1806.69	3379.28	6.00	8.00	68.00	100.00	102.00	150.00
	A	315.00	55.11	15.64	7.39	451.67	844.82	563.21	422.41	49.69	33.79	33.13	22.53
T	T	1260.00	220.45	62.58	29.56	1806.69	3379.28	6.00	8.00	68.00	100.00	102.00	150.00
	A	315.00	55.11	15.64	7.39	451.67	844.82	563.21	422.41	49.69	33.79	33.13	22.53

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment		Student Credit Hours	
										Mid-Term	Maximum	Mid-Term	Maximum
4041200 HOME ECONOMICS													
C	T	9651.28		1159.36		5933.72	16744.36	25.00	39.00	218.00	301.00	335.00	427.00
	A	603.20		72.46		370.85	1046.52	669.77	429.34	76.80	55.62	49.98	39.21
T	T	9651.28		1159.36		5933.72	16744.36	25.00	39.00	218.00	301.00	335.00	427.00
	A	603.20		72.46		370.85	1046.52	669.77	429.34	76.80	55.62	49.98	39.21
4041300 JOURNALISM													
D	T	192.00	1.82	.03	.07	85.68	279.60	1.00	1.00	5.00	25.00	5.00	25.00
	A	192.00	1.82	.03	.07	85.68	279.60	279.60	279.60	55.92	11.18	55.92	11.18
T	T	192.00	1.82	.03	.07	85.68	279.60	1.00	1.00	5.00	25.00	5.00	25.00
	A	192.00	1.82	.03	.07	85.68	279.60	279.60	279.60	55.92	11.18	55.92	11.18
4041600 HEALTH OCCUPATION													
B	T	1200.00		147.70		1561.46	2909.16	6.00	6.00	37.00	70.00	111.00	210.00
	A	600.00		73.85		780.73	1454.58	484.86	484.86	78.62	41.55	26.21	13.85
T	T	1200.00		147.70		1561.46	2909.16	6.00	6.00	37.00	70.00	111.00	210.00
	A	600.00		73.85		780.73	1454.58	484.86	484.86	78.62	41.55	26.21	13.85
4041800 ADULT BASIC EDUCATION													
D	T	1609.57	59.02	7.66	6.48	548.34	2231.07	2.00	3.00	32.00	30.00	32.00	30.00
	A	804.78	29.51	3.83	3.24	274.17	1115.54	1115.54	743.69	69.72	74.37	69.72	74.37
T	T	1609.57	59.02	7.66	6.48	548.34	2231.07	2.00	3.00	32.00	30.00	32.00	30.00
	A	804.78	29.51	3.83	3.24	274.17	1115.54	1115.54	743.69	69.72	74.36	69.72	74.37
4041900 G.E.D. PREPARATORY													
C	T	2520.00				3400.83	5920.83	12.00	12.00	64.00	100.00	192.00	300.00
	A	630.00				850.20	1480.21	493.40	493.40	92.51	59.20	30.84	19.74

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment		Student Credit Hours	
										Mid-Term	Maximum	Mid-Term	Maximum
4041900 G.E.D. PREPARATORY (cont.)													
D	T	4055.00		737.58	48.22	9424.52	14265.32	20.00	35.00	110.00	80.00	550.00	400.00
	A	579.28		105.36	6.88	1346.36	2037.90	713.26	407.58	129.68	178.31	25.94	35.66
T	T	6575.00		737.58	48.22	12825.35	20186.15	32.00	47.00	174.00	180.00	742.00	700.00
	A	597.72		67.05	4.38	1165.94	1835.10	630.81	429.49	116.01	112.14	27.20	28.83
4042100 TRADES & INDUSTRY													
A	T	2430.00	81.09	780.46	400.34	3434.08	7125.97	7.99	26.66	52.00	60.00	138.65	159.98
	A	810.00	27.03	260.15	134.45	1144.69	2375.32	891.86	267.29	137.04	118.77	51.40	44.54
C	T	3387.06		1100.34	31.70	1682.69	6201.79	8.00	14.00	59.00	123.00	95.00	196.00
	A	677.41		226.80	6.35	336.54	1240.36	775.22	442.99	105.12	50.42	65.28	31.64
D	T	3142.16	53.16	722.59	49.96	9133.22	13101.09	22.00	22.50	149.00	190.00	533.00	590.00
	A	448.88	7.59	103.23	7.14	1304.75	1871.58	595.50	582.27	87.93	68.95	24.58	22.21
T	T	8959.22	134.25	2603.39	482.00	14249.99	26428.85	37.99	63.16	260.00	373.00	766.65	945.98
	A	597.28	8.95	173.56	32.13	950.00	1761.92	695.68	418.44	101.65	70.85	34.47	27.94
4042200 HOBBY & RECREATIONAL													
A	T	2408.58	515.59	1028.34	2011.01	9575.80	15539.32	20.66	19.99	173.00	212.00	386.62	503.94
	A	267.62	57.29	114.26	223.45	1063.99	1726.59	752.15	777.35	89.82	73.30	42.39	30.84
B	T	1800.00	232.47	185.16	35.39	2110.07	4363.09	9.00	11.00	86.00	95.00	150.00	160.00
	A	360.00	46.49	37.03	7.07	422.01	872.61	484.78	396.64	50.73	45.92	29.08	27.26
C	T	780.00				531.38	1311.38	3.00	3.00	10.00	30.00	30.00	90.00
	A	780.00				531.38	1311.38	437.13	437.13	131.14	43.71	43.71	14.57
D	T	287.00	419.36	20.83	2.16	376.98	1106.33	1.00	1.50	22.00	30.00	22.00	30.00
	A	287.00	419.36	20.83	2.16	376.98	1106.33	1106.33	737.55	50.29	36.88	50.29	36.88
E	T	680.00		49.51		207.23	936.74	2.66	2.66	4.00	15.00	10.66	39.99
	A	680.00		49.51		207.23	936.74	352.16	352.16	234.19	62.45	87.87	23.42

College	Total or Average	Direct Salary	Indirect Salary	Supplies	Other	Institutional Allocation	Total Cost	Credit Hours	Contact Hours	Enrollment Mid-Term	Enrollment Maximum	Student Credit Hours Mid-Term	Student Credit Hours Maximum
4042200 HOBBY & RECREATIONAL (cont.)													
T	T	5955.58	1167.42	1283.84	2048.56	12801.46	23256.86	36.32	38.15	295.00	382.00	599.28	823.93
	A	350.32	68.67	75.52	120.50	753.02	1368.05	640.33	609.61	78.83	60.88	38.80	28.22

APPENDIX J

COMPARISON OF COSTS, REIMBURSEMENT, AND TUITION FOR EACH DISCIPLINE BY INSTITUTION

APPENDIX J

COMPARISON OF COSTS, REIMBURSEMENT, AND TUITION FOR EACH DISCIPLINE BY INSTITUTION

Heading	Description
College	Identifies the institutions participating in this study.
Enrollment	Identifies the number of students enrolled at mid-term as submitted to the Junior College Board for reapportionment purposes.
Jr. College Reim.	Identifies the amount of reapportionment monies received from the Junior College Board by each institution.
Tuition	Identifies the amount of money received by each institution from tuition charges determined by multiplying student credit hours by the charge at each institution.
Voc. En.	Identifies the number of students based on mid-term enrollment submitted to the Division of Vocational and Technical Education.
Voc. Ed. Reim.	Identifies the amount of money received from the Division of Vocational and Technical Education for reimbursement purposes determined by multiplying student credit hours by the rate of reimbursement for each institution.
Total Revenue	Indicates the total of the monies identified under the headings of Jr. College Reim., Tuition, and Voc. Ed. Reim.
Total Cost	Identifies the cost for each discipline as computed in this study based upon all operational expenditures.
Local Dis. Cost	Identifies the expended costs for the local district computed by subtracting total revenue from total cost.
Max. En.	Identifies the maximum enrollment in sections offered for each discipline as indicated by the participating institutions.

COMPARISON OF COSTS, REIMBURSEMENT, AND TUITION FOR EACH DISCIPLINE BY INSTITUTION (Cont.)

Heading	Description
Max. Revenue	Identifies the total amount of revenue available by extending the tuition and junior college reimbursement monies based on maximum enrollment and maintained current level of vocational monies. This column represents the total amount of money provided to the institution by the Division of Vocational and Technical Education during fiscal 1969-70 on an occupational code basis and the amounts of tuition and Junior College Board Reapportionment monies which would have accrued to the institution if maximum enrollment for the discipline was achieved.
Student Credit Hour Costs Mid-Term Total Loc. Dis.	The Total heading identifies the cost per student credit hour as computed on the basis of all operational expenditures in this study, and the Loc. Dis. heading identifies the cost per student credit hour derived by dividing the local district cost by the total number of student credit hours generated at mid-term.
Student Credit Hour Costs Maximum Total Loc. Dis.	The Total heading identifies the cost per student credit hour based on the projected maximum number of students which could be accomodated in all sections offered, while the Local District heading indicates the cost to the local district per student credit hour based again on the maximum number of students which could be accomodated in all sections offered.

Notes: (1) Refer to Tables in Appendix I for total student credit hours at mid-term and possible maximum enrollment.

(2) Number of sections offered by discipline and institution are shown in Appendix K.

(3) Tuition calculated at existing semester hour rates.

A = $4.88
B = $7.00
C = $3.00
D = $5.00
E = $8.25

COMPARISON OF COSTS, REIMBURSEMENT, AND TUITION FOR EACH DISCIPLINE BY INSTITUTION (Cont.)

(4) Average enrollment can be determined by dividing the number of sections (Appendix K) at the particular institution into the total enrollment at the institution (Appendix I).

(5) In some cases the vocational enrollment is lower than the mid-term enrollment indicating that not all students were vocational.

(6) In some cases the mid-term enrollments are larger than the maximum designed enrollments indicating these sections to be over-utilized.

(7) In some cases the vocational enrollment is larger than the mid-term enrollment indicating that different data were submitted to each agency in the format it requested. This is a limitation of working with multiple source documents submitted to different agencies in different formats.

(8) The negative sign indicates that the combined revenue sources of Vocational and Technical Education reimbursement, Junior College Board Reapportionment and tuition charges exceeded total operational costs. In such cases the amount of revenue exceeding the cost was divided by appropriate number of student credit hours indicating the amount of excess revenue above costs per student credit hour.

APPENDIX J

COMPARISON OF COSTS, REIMBURSEMENT, AND TUITION FOR EACH DISCIPLINE BY INSTITUTION

BACCALAUREATE

											Student Credit Hour Costs			
											Mid-Term		Maximum	
College	Enrollment	Jr. College Reim.	Tuition	Voc. En.	Voc. Ed. Reim.	Total Revenue	Total Cost	Local Dis. Cost	Max. En.	Max. Revenue	Total	Loc. Dis.	Total	Loc. Dis.
1001000 - 1001080 AGRICULTURAL SCIENCES														
A	91	3946.06	1241.50	33	1188.00	6375.56	9852.95	3477.39	135	7740.60	38.69	13.65	25.93	5.56
B	40	1860.00	840.00	30	945.00	3645.00	4834.47	1189.47	48	4185.00	40.28	9.91	33.57	4.51
D	14	651.00	210.00	7	204.75	1065.75	5454.20	4388.45	60	3894.75	129.86	104.48	30.30	8.66
E	61	2520.52	1342.00	15	330.00	4192.52	7855.93	3663.41	104	6915.28	48.29	22.52	28.33	3.46
1002000 - 1002080 BIOLOGICAL SCIENCES														
A	1100	45452.00	14300.00			59752.00	133052.44	73300.44	1368	74309.76	45.36	24.99	36.47	16.10
B	1100	73919.50	33383.00	56	2352.00	109654.50	177112.88	67458.38	922	86884.50	37.13	14.14	47.14	24.01
C	712	44609.00	8634.00			53243.00	123304.86	70061.86	914	68524.00	42.84	24.34	33.28	14.79
D	1150	71300.00	23000.00			94300.00	157216.66	62916.66	816	66912.00	34.17	13.67	48.16	27.66
E	548	22643.36	12056.00			34699.36	75442.08	40742.72	760	48123.20	51.63	27.88	37.22	13.48
1003000 MATHEMATICAL SCIENCES														
A	951	39295.32	12363.00			51658.32	98057.00	46398.73	1451	78818.32	38.66	18.29	25.34	4.97
B	1173	61566.00	27804.00			89370.00	138188.26	48818.26	1847	142222.50	34.79	12.29	21.86	- .64
C	909	44082.00	8532.00			52614.00	99696.50	47082.55	1392	80697.00	35.05	16.55	22.85	4.35
D	1517	84924.50	27395.00			112319.50	204405.56	92086.11	2280	167895.00	37.30	16.80	24.95	7.02
E	1055	43592.60	23210.00			66802.60	104439.31	37636.73	1950	123474.00	37.12	13.37	20.08	- .68
1004000 - 1004060 PHYSICAL SCIENCES														
A	507	21300.46	6701.50			28001.96	73753.44	45751.48	780	43347.36	53.65	33.28	34.66	14.29
B	693	49600.00	22400.00	57	2992.50	74992.50	171270.74	96278.24	988	104422.50	53.52	30.08	37.99	14.83
C	592	39246.00	7596.00			46842.00	104689.26	57847.26	832	66174.50	41.34	22.84	29.26	10.77

College	Enrollment	Jr. College Reim.	Tuition	Voc. En.	Voc. Ed. Reim.	Total Revenue	Total Cost	Local Dis. Cost	Max. En.	Max. Revenue	Student Credit Hour Costs Mid-Term Total	 Mid-Term Loc. Dis.	 Maximum Total	 Maximum Loc. Dis.
1004000 - 1004060 PHYSICAL SCIENCES (cont.)														
D	1058	66991.00	21610.00			88601.00	170051.96	81450.96	824	68962.00	39.34	18.84	50.55	30.05
E	266	10991.12	5852.00			16843.12	41175.94	24332.82	484	30646.88	58.05	34.30	31.90	8.16
1005000 - 1005075 ENGINEERING SCIENCES														
A	26	1074.32	338.00			1412.32	4396.86	2984.54	40	2172.80	63.42	43.05	41.22	20.85
B	107	6417.00	2898.00			9315.00	20059.31	10744.31	201	17415.00	48.45	25.95	25.91	3.55
C	55	2557.50	495.00			3052.50	8010.12	4957.62	100	5550.00	48.54	30.04	26.70	8.20
D	123	3797.50	1225.00			5022.50	13047.45	8024.95	238	9307.00	53.25	32.75	28.73	8.24
E	38	1570.16	836.00			2406.16	6398.79	3992.63	75	4749.00	63.15	39.40	31.99	8.29
1006000 - 1006040 SOCIAL SCIENCES														
A	3029	125158.28	39377.00			164535.28	294814.65	130279.37	4217	229067.44	36.50	16.13	26.21	5.85
B	4227	219557.50	99155.00	23	724.50	319437.00	399095.47	79658.47	5705	425187.00	28.17	5.62	21.15	- 1.38
C	2611	128526.00	24876.00	90	3442.50	156844.50	241013.01	84168.51	3051	182763.00	29.06	10.15	24.86	6.01
D	5958	279000.00	90000.00			369000.00	546929.16	177929.16	8210	508502.50	30.38	9.88	22.05	1.55
E	4647	192014.04	102234.00			294248.04	412610.43	118362.39	6428	407020.96	33.30	9.55	39.40	.53
1007100 - 1007315 ENGLISH														
A	2219	91689.08	28847.00			120536.08	241077.20	120541.12	3074	166979.68	40.74	20.37	29.41	9.04
B	2656	125813.50	56819.00			182632.50	246806.97	64174.47	3325	229162.50	30.40	7.90	24.23	1.73
C	1313	61054.50	11817.00			72871.50	129693.58	56822.08	1704	94572.00	32.92	14.42	25.37	6.87
D	2895	134617.50	43425.00			178042.50	331281.80	153239.30	4100	252150.00	38.14	17.64	26.93	6.43
E	2293	94746.76	50446.00			145192.76	200465.38	55272.62	3142	198951.44	32.78	9.04	23.92	.18
1007400 - 1007540 FOREIGN LANGUAGE														
A	135	5578.20	1755.00			7333.20	20086.02	12752.82	305	16567.60	55.80	35.42	24.69	4.32
B	385	23529.00	10626.00			34155.00	64303.23	30148.23	672	58860.00	42.36	19.86	24.58	2.08
C	116	6277.50	1215.00			7492.50	8628.36	7154.12	112	12284.00	37.84	31.37	19.26	- 8.16

College	Enrollment	Jr. College Reim.	Tuition	Voc. En.	Voc. Ed. Reim.	Total Revenue	Total Cost	Local Dis. Cost	Max. En.	Max. Revenue	Student Credit Hour Costs Mid-Term Total	Student Credit Hour Costs Mid-Term Loc. Dis.	Student Credit Hour Costs Maximum Total	Student Credit Hour Costs Maximum Loc. Dis.
1007400 - 1007540 FOREIGN LANGUAGE (cont.)														
D	437	26691.00	8610.00			35301.00	94279.52	58978.52	1110	88560.00	54.75	34.25	21.82	1.32
E	328	13552.96	7216.00			20768.96	56898.37	36129.41	950	60154.00	65.05	41.31	22.46	- 1.29
1007600 PHILOSOPHY														
A	192	7933.44	2496.00			10429.00	19935.76	9506.32	280	15209.60	38.94	18.56	26.70	6.33
B	153	7114.50	3213.00			10327.50	11716.28	1388.78	237	15997.50	25.53	3.02	16.48	- 6.02
C	331	15391.50	2979.00			18370.50	40022.99	15634.23	504	23976.00	34.21	13.36	26.47	10.61
D	10	155.00	50.00			205.00	2218.40	2013.40	20	410.00	221.84	201.34	110.92	90.40
E	129	5330.28	2838.00			8168.28	14163.20	5994.92	167	10574.44	41.17	17.42	31.80	1.04
1007800 - 1008200 SPEECH														
A	562	23221.84	7306.00			30527.84	54798.44	24270.60	700	38024.00	36.56	16.19	29.35	8.99
B	817	37990.50	17157.00			55147.50	84104.76	28957.26	975	65812.50	34.31	11.81	28.75	6.25
C	313	14554.50	2817.00			17371.50	28276.29	10904.79	350	19425.00	30.11	11.61	26.93	8.43
D	942	43803.00	14130.00			57933.00	98742.86	40809.86	1090	67035.00	34.94	14.44	30.19	9.70
E	143	5908.76	3146.00			9054.76	16316.83	7262.07	300	18996.00	42.79	19.04	20.39	3.35
1009110 - 1009200 ART & DESIGN														
A	388	16032.16	5044.00	20	720.00	21796.16	40854.71	19058.55	475	26162.00	39.48	18.42	32.25	11.60
B	536	18925.50	8547.00			27472.50	49444.04	21971.54	661	32850.00	40.49	17.99	33.87	11.37
C	257	11950.50	1863.00			14263.50	25043.18	10779.68	380	21090.00	32.48	13.98	21.97	3.47
D	763	35340.00	11400.00			46740.00	91834.42	45094.42	996	60844.00	40.28	19.77	30.94	10.44
E	384	15866.88	8448.00	7	154.00	24468.88	52304.10	27835.22	580	36879.60	51.08	27.18	33.82	9.97
1009300 DRAMA														
D	270	11966.00	3860.00			15826.00	37274.41	21448.41	380	22447.50	48.28	27.78	34.04	13.54
E	64	2644.48	1408.00			4052.48	6393.79	2341.31	112	7091.84	37.46	13.72	21.41	- 2.34

College	Enrollment	Jr. College Reim.	Tuition	Voc. En.	Voc. Ed. Reim.	Total Revenue	Total Cost	Local Dis. Cost	Max. En.	Max. Revenue	Student Credit Hour Costs Mid-Term Total	Mid-Term Loc. Dis.	Maximum Total	Maximum Loc. Dis.
1009400 - 1009500 MUSIC														
A	487	15820.37	4977.35			21229.72	47611.64	26381.92	886	28164.92	46.63	25.84	34.43	14.06
B	691	19902.00	8988.00			28890.00	64210.27	35320.27	1386	59310.00	50.01	27.50	24.36	1.85
C	130	3751.00	726.00			4477.00	6413.21	1936.21	214	6623.00	26.50	8.00	17.91	.59
D	1057	41307.50	13325.00			54866.50	118067.07	63200.57	1900	82820.00	44.30	23.71	29.22	8.72
E	164	5229.29	2821.50			8274.79	18614.13	10339.34	416	16653.16	54.43	30.23	26.54	2.80
1011000 - 1011900 BUSINESS														
A	1981	81854.92	25753.00	847	30492.00	138099.92	212389.46	74199.54	2807	180700.24	40.20	14.04	28.37	4.23
B	10	465.00	210.00			675.00	1096.50	421.50	35	2362.50	36.55	14.05	10.44	-12.06
C	371	17251.50	3339.00			23803.50	45175.24	21371.74	608	36957.00	40.59	19.20	24.76	4.51
E	1130	46691.60	24860.00	402	8844.00	80395.60	125007.02	44611.42	2078	140422.96	52.86	18.86	22.56	- 2.78
1012000 - 1012600 EDUCATION														
B	509	23668.50	10689.00			34357.50	42599.40	8241.90	675	45562.50	27.90	5.39	21.04	- 1.46
D	391	18181.50	5865.00			24046.50	38411.84	14365.34	527	32410.50	32.75	12.24	24.30	3.79
1013000 - 1013400 HOME ECONOMICS														
A	83	3429.56	1079.00	43	1548.00	6056.56	9435.49	3378.93	84	6324.80	42.63	15.26	42.12	13.89
B	243	10555.50	4767.00			15322.50	30878.10	15555.60	424	26460.00	45.34	22.84	26.26	3.76
C	20	930.00	180.00			1110.00	3242.76	2132.76	28	1554.00	54.04	35.54	38.60	20.09
1014000 JOURNALISM														
B	1	46.50	21.00			67.50	6192.43	6124.93	20	1350.00	2064.14	2041.64	103.21	80.70
C	12	372.00	72.00			444.00	2269.33	1825.33	40	1480.00	94.56	76.05	28.37	9.86
D	40	1441.50	465.00			1906.50	3381.66	1475.16	60	3075.00	36.36	15.86	22.54	2.04
E	18	743.76	396.00			1139.76	2887.12	1747.36	40	2532.80	60.16	36.41	27.07	3.33

College	Enrollment	Jr. College Reim.	Tuition	Voc. En.	Voc. Ed. Reim.	Total Revenue	Total Cost	Local Dis. Cost	Max. En.	Max. Revenue	Student Credit Hour Costs Mid-Term Total	Student Credit Hour Costs Mid-Term Loc. Dis.	Student Credit Hour Costs Maximum Total	Student Credit Hour Costs Maximum Loc. Dis.
1020000 - 1020820 EDUCATIONAL SERVICES														
A	3360	57600.08	18122.00	9	81.00	75803.08	167970.37	92167.29	4318	97110.00	45.19	24.79	35.26	14.88
B	2730	49925.50	22547.00			72472.50	144771.10	72298.60	2860	75150.00	44.95	22.44	43.34	20.84
C	858	19328.50	3741.00			23069.50	47459.68	24390.18	1362	36519.00	38.06	19.55	24.04	5.54
D	638	9889.00	3190.00			13079.00	54401.71	41322.71	822	16851.00	85.27	64.76	66.18	15.91
E	2962	30597.46	16291.00			46888.46	92710.72	45822.26	3387	53616.21	46.95	23.20	41.06	17.32
							OCCUPATIONAL							
2-01.0100 AGRICULTURAL PRODUCTION														
A	14	578.48	182.00	11	396.00	1156.48	2062.11	905.63	35	2153.20	55.25	24.26	22.10	- .98
B	84	5828.00	2632.00	57	2814.00	11274.00	18544.61	7270.61	92	12894.00	49.32	19.33	41.39	12.61
C	16	1240.00	240.00	10	637.50	2117.50	3206.42	1088.92	25	2950.00	40.08	13.61	25.65	2.05
D	215	12415.50	4005.00	157	5850.75	22271.25	48016.73	25745.48	320	31065.75	59.95	32.14	39.04	13.78
E	16	826.40	440.00	4	176.00	1442.40	5736.05	4293.65	60	6508.00	107.57	80.52	21.51	- 2.90
2-01.0101 ANIMAL SCIENCE														
A	63	2603.16	819.00	68	2448.00	5870.16	8462.33	2592.17	120	8966.40	50.38	15.43	26.45	- 1.58
C	18	837.00	162.00	20	765.00	1764.00	3726.18	1962.18	50	3540.00	69.00	36.33	24.84	1.24
2-01.0102 PLANT SCIENCE														
A	17	702.44	221.00	19	684.00	1607.44	2038.17	430.73	20	1770.40	44.97	9.50	38.23	5.03
C	60	2914.00	564.00	61	2435.25	5913.25	9530.82	3617.57	125	9835.25	50.70	19.24	23.83	- .76
E	68	2809.76	1496.00	76	1672.00	5977.76	8140.51	2162.75	100	7674.00	44.90	11.92	30.53	1.75
2-01.0104 FARM BUSINESS MANAGEMENT														
A	107	4421.24	1391.00	86	3096.00	8908.24	15365.80	6457.56	230	13969.60	53.85	22.63	25.05	2.28
B	11	852.50	385.00	11	577.50	1815.00	2767.51	952.51	20	2827.50	50.32	17.31	27.68	- .60

College	Enrollment	Jr. College Reim.	Tuition	Voc. En.	Voc. Ed. Reim.	Total Revenue	Total Cost	Local Dis. Cost	Max. En.	Max. Revenue	Student Credit Hour Costs			
											Mid-Term		Maximum	
											Total	Loc. Dis.	Total	Loc. Dis.
2-01.0104 FARM BUSINESS MANAGEMENT (cont.)														
C	9	481.50	81.00	10	382.50	882.00	1863.09	981.09	25	1770.00	69.00	36.33	24.84	1.24
E	39	1611.48	858.00	16	352.00	2821.48	4834.98	2013.50	60	4151.20	46.49	19.36	30.22	4.27
2-01.0200 AGRICULTURAL SUPPLIES & SERVICES														
B	135	10462.50	4725.00	90	5670.00	19170.00	28890.44	9720.00	140	20857.50	48.15	13.38	42.80	11.90
D	108	5952.00	1920.00	33	1550.25	9422.25	17948.11	8525.86	210	17540.25	46.74	22.20	23.01	.52
E	35	2437.88	1298.00	37	1430.00	5165.88	9565.62	4399.74	80	11561.20	60.80	27.96	22.42	- 4.68
2-01.0201 AGRICULTURAL CHEMICALS														
B	53	2464.50	1113.00	48	1512.00	5089.50	5785.93	696.43	54	5157.00	36.39	4.38	35.72	3.88
E	14	578.48	308.00	13	286.00	1172.48	3226.71	2054.23	20	1552.40	86.46	55.04	60.52	31.40
2-01.0202 FEEDS														
B	57	2650.50	1197.00	35	1102.50	4950.00	8229.41	3279.41	60	5152.50	48.13	19.17	45.72	17.09
E	26	1074.32	572.00	25	550.00	2196.32	3908.66	1712.34	40	3082.80	56.39	24.70	36.65	7.74
2-01.0204 FERTILIZERS (PLANT FOOD)														
B	52	2418.00	1092.00	46	1449.00	4959.00	6127.04	1168.04	54	5094.00	39.28	7.48	37.82	6.38
C	8	372.00	72.00	8	306.00	750.00	1181.77	431.77	25	1693.50	49.24	17.99	15.76	- 6.83
E	16	661.12	352.00	24	528.00	1541.12	2544.81	1003.69	20	1794.40	59.65	23.52	47.73	14.07
2-01.0300 AGRICULTURAL MECHANICS														
D	99	4495.00	1450.00	99	2486.75	8431.75	29479.27	21047.52	235	18681.75	101.65	72.57	37.32	13.67

College	Enrollment	Jr. College Reim.	Tuition	Voc. En.	Voc. Ed. Reim.	Total Revenue	Total Cost	Local Dis. Cost	Max. En.	Max. Revenue	Student Credit Hour Costs			
											Mid-Term		Maximum	
											Total	Loc. Dis.	Total	Loc. Dis.
2-01.0301 AGRICULTURAL POWER & MACHINERY														
A	36	1487.52	468.00	18	648.00	2603.52	5537.77	2934.25	50	3616.00	57.69	30.56	41.54	14.41
B	40	1860.00	840.00	23	724.50	3424.50	5937.06	2512.56	36	3154.50	49.48	20.93	54.97	25.77
C	15	930.00	180.00	15	765.00	1875.00	2661.82	786.82	25	2615.00	44.36	13.11	26.62	.46
E	72	3594.84	1914.00	70	1826.00	7334.84	15496.20	8161.36	177	16579.56	66.80	35.18	24.94	- 1.74
2-01.0302 AGRICULTURE STRUCTURES & CONVENIENCES														
C	13	806.00	156.00	13	663.00	1625.00	2933.18	1308.18	25	2513.00	56.41	25.15	29.33	4.20
2-01.0305 AGRICULTURE MECHANICAL SKILLS														
A	120	4627.84	1456.00	91	3276.00	9359.84	15441.00	6081.16	178	12384.08	51.71	20.36	34.27	6.78
2-01.0306 AGRICULTURE CONSTRUCTION & MAINTENANCE														
A	93	3346.92	1053.00	83	2682.00	7081.92	11170.48	4088.56	172	11120.56	51.72	18.93	26.51	.12
2-01.0500 ORNAMENTAL HORTICULTURE														
B	41	1922.00	868.00	40	1270.50	4060.50	7495.81	3435.31	60	5185.50	60.45	27.70	43.08	13.28
2-01.0504 LANDSCAPING														
B	21	976.50	441.00	7	220.50	1638.00	2624.08	986.08	36	2650.50	41.65	15.65	24.30	- .24
2-01.0602 RECREATION														
E	254	10949.80	5830.00	263	6050.00	22829.80	48610.28	25780.48	360	30744.80	68.80	36 48	46.75	17.18

											Student Credit Hour Costs			
											Mid-Term		Maximum	
College	Enrollment	Jr. College Reim.	Tuition	Voc. En.	Voc. Ed. Reim.	Total Revenue	Total Cost	Local Dis. Cost	Max. En.	Max. Revenue	Total	Loc. Dis.	Total	Loc. Dis.
2-01.0603 SOIL (AGRICULTURAL RESOURCES)														
B	33	1751.50	791.00	62	2100.00	4642.50	4712.94	70.44	36	4935.00	41.71	.62	37.40	- 1.76
2-01.9900 AGRICULTURE, OTHER														
A	249	10164.72	3198.00	215	8046.00	21408.72	34343.00	12934.28	310	26735.00	52.36	19.71	39.63	8.78
B	143	8044.50	3633.00	105	3780.00	15457.50	29236.36	13778.86	190	19980.00	56.33	26.54	40.61	12.86
E	193	8635.88	4598.00	198	4752.00	17985.88	29727.77	11741.89	355	34499.00	53.35	21.07	23.47	- 3.77
2-04.0100 ADVERTISING SERVICES														
B	42	1953.00	882.00	2	63.00	2898.00	4013.54	1115.54	70	4788.00	31.85	8.85	19.11	- 3.69
2-04.0700 FOOD SERVICES (SALES)														
B	19	1503.50	679.00	17	913.50	3096.00	12489.31	9393.31	30	4288.50	128.76	96.83	83.26	55.07
2-04.1700 REAL ESTATE (SALES)														
A	42	1735.44	546.00	40	288.00	2569.44	4329.36	1759.92	50	3004.00	38.66	15.71	32.47	9.94
B	103	4789.50	2163.00	48	1512.00	8464.50	8113.96	- 350.54	150	11637.00	26.26	- 1.13	18.03	- 7.83
D	31	1441.50	465.00	27	789.75	2696.25	3157.49	461.24	40	3249.75	33.95	4.95	26.31	- .76
2-04.1900 TRANSPORTATION														
A	29	1002.01	315.25	17	144.00	1461.26	2885.64	1424.38	55	2588.40	44.63	22.02	24.05	2.48
B	14	651.00	294.00	14	441.00	1386.00	1337.61	- 48.39	30	2466.00	31.85	- 1.15	14.86	-12.54
D	54	2511.00	810.00	53	1550.25	4871.25	6257.41	1386.16	200	13850.25	38.63	8.55	10.43	- 2.66

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2-04.2000 RETAIL TRADE (OTHER)														
B	16	744.00	336.00			1080.00	2054.40	974.40	35	2362.50	42.80	20.30	19.57	- 2.93
2-07.0101 DENTAL ASSISTING														
A	388	12561.28	3952.00	358	10314.00	26827.28	48362.73	21535.45	664	35951.36	59.66	26.56	34.68	8.89
C	120	5611.00	1086.00	85	3544.50	10241.50	16278.53	6037.03	300	20194.50	44.97	16.67	18.09	- 4.35
E	168	7768.16	4136.00	146	3652.00	15556.16	34937.92	19381.76	152	15049.60	69.70	38.66	72.79	41.43
2-07.0102 DENTAL HYGIENE (ASSOCIATE DEGREE)														
A	276	8966.44	2821.00	218	6156.00	17943.44	39400.21	21456.77	450	23656.00	68.10	37.08	42.22	16.87
E	146	6363.28	3388.00	120	2959.00	12710.28	30897.21	18186.93	366	25374.28	75.25	44.29	32.73	13.47
2-07.0301 NURSING (ASSOCIATE DEGREE)														
B	140	5192.50	2345.00	134	3360.00	10897.50	31874.68	20977.18	295	22035.00	95.15	62.61	38.40	11.85
D	515	31294.50	10095.00	446	16965.00	58354.50	149187.34	90832.84	585	55409.50	73.89	44.98	74.63	46.91
E	212	16982.52	9042.00	143	5962.00	31986.52	73598.19	41611.70	250	36355.60	67.16	37.97	57.50	29.10
2-07.0302 PRACTICAL (VOCATIONAL) NURSING														
A	343	22726.00	7150.00	338	20376.00	50252.00	82639.44	32387.49	430	62032.00	56.35	22.08	38.74	9.66
D	259	16306.00	5260.00	241	9212.00	30788.00	54308.39	23530.39	275	31311.00	51.62	22.36	50.38	21.33
2-07.0305 SURGICAL TECHNICIAN (OPERATING ROOM TECHNICIAN)														
D	29	3844.00	1240.00	28	2340.00	7424.00	23325.64	15901.64	40	9310.00	94.05	64.11	68.60	41.22

College	Enrollment	Jr. College Reim.	Tuition	Voc. En.	Voc. Ed. Reim.	Total Revenue	Total Cost	Ma Local Dis. Cost	Max. En.	Max. Revenue	Student Credit Hour Costs			
											Mid-Term		Maximum	
											Total	Loc. Dis.	Total	Loc. Dis.
2-07.0402 PHYSICAL THERAPY ASSISTANT														
D	42	3890.50	1255.00	42	2447.25	7592.75	29196.93	21604.18	48	8597.25	116.32	86.07	97.32	68.66
2-07.9900 HEALTH OCCUPATIONS, OTHER														
D	72	3968.00	1280.00	71	2466.75	7714.75	20894.15	13179.40	162	14889.75	81.62	51.48	34.48	9.91
E	266	10991.12	5852.00	7	154.00	16997.12	33184.02	16186.90	340	21682.80	46.79	22.82	36.60	12.69
2-09.0102 CHILD DEVELOPMENT														
A	47	2685.80	845.00	54	2952.00	6482.80	8354.67	1871.87	110	12729.60	48.20	10.80	17.40	9.12
D	27	418.50	135.00	25	243.75	797.25	1120.52	323.27	40	1063.75	41.50	11.76	28.01	1.43
E	106	4379.92	2332.00	102	2244.00	8955.92	14172.35	5216.43	210	15541.20	50.14	18.46	25.31	- 2.44
2-09.0201 CARE & GUIDANCE OF CHILDREN														
C	59	2743.50	531.00	21	803.25	4077.75	7481.35	3403.60	108	5994.00	42.27	19.23	23.09	4.59
D	92	4278.00	1380.00	85	2486.25	8144.25	15487.93	7343.68	156	12080.25	56.12	26.60	33.09	7.27
2-09.0203 FOOD MANAGEMENT, PRODUCTION & SERVICES														
D	77	3580.50	1155.00			4735.50	5701.97	966.47	80	4920.00	24.68	4.18	23.76	3.25
2-14.0100 ACCOUNTING & COMPUTING														
A	30	1239.60	390.00	41	1476.00	3105.60	2875.04	- 230.56	45	3920.40	35.94	- 2.87	23.96	- 8.71
B	875	40687.50	18375.00	317	9985.50	69048.00	84263.88	15215.92	1360	101785.50	32.10	5.80	20.65	- 4.32
D	1492	68060.50	21955.00	1034	30020.25	120035.75	129856.20	9820.45	2186	163317.75	29.57	2.23	19.89	- 5.13

College	Enrollment	Jr. College Reim.	Tuition	Voc. En.	Voc. Ed. Reim.	Total Revenue	Total Cost	Local Dis. Cost	Max. En.	Max. Revenue	Student Credit Hour Costs Mid-Term Total	Student Credit Hour Costs Mid-Term Loc. Dis.	Student Credit Hour Costs Maximum Total	Student Credit Hour Costs Maximum Loc. Dis.
2-14.0200 BUSINESS DATA PROCESSING														
A	459	18965.88	5967.00	520	18720.00	43652.88	60950.17	17297.29	684	55190.88	49.80	14.02	33.41	3.16
B	358	19886.50	8981.00	375	13881.00	42748.50	54433.23	11684.73	618	64371.00	42.43	9.11	24.26	- 4.43
C	238	13609.00	2634.00	131	6591.75	22834.75	43913.79	21079.04	385	32861.75	50.02	24.01	30.93	7.78
D	1070	41664.00	13440.00	835	19743.75	74847.75	94406.13	19558.42	1358	87164.50	35.12	7.28	28.32	2.17
E	1074	45617.28	24288.00	947	21516.00	91421.28	116909.19	25487.93	1826	140807.20	17.64	8.66	10.19	4.69
2-14.0300 FILING, OFFICE MACHINES, GENERAL OFFICE CLERICAL														
B	60	2790.00	1260.00	43	1354.50	5404.50	7005.94	1601.44	70	6079.50	38.92	8.89	33.36	4.41
C	41	1906.50	369.00	34	1300.50	3576.00	5425.59	1849.59	60	4630.50	44.11	15.03	30.14	4.42
D	50	775.00	250.00	50	77.00	1102.00	1500.34	398.34	48	1061.00	30.01	7.96	31.26	9.14
E	21	867.72	462.00	20	440.00	1769.72	2126.71	356.99	25	2023.00	37.98	6.36	31.90	1.55
2-14.0600 PERSONNEL, TRAINING & OTHER RELATED OCCUPATIONS														
B	419	19483.50	8799.00			28282.50	39203.43	10920.93	506	34155.00	31.19	8.68	25.83	3.33
2-14.0700 STENOGRAPHIC, SECRETARIAL & RELATED OCCUPATIONS														
A	79	3264.28	1027.00	171	6156.00	10447.28	11897.48	1450.20	140	13760.80	56.48	6.88	31.87	- 4.99
B	268	12462.00	5628.00	94	2961.00	21051.00	24958.89	3907.89	450	33336.00	31.04	4.86	18.49	- 6.20
C	104	4836.00	936.00	82	3136.50	8908.50	15408.62	6500.12	140	10906.50	49.39	20.83	36.69	10.72
D	1163	49166.00	15860.00	898	23574.75	88600.75	122294.25	33693.52	1871	130482.25	38.55	10.62	23.45	- 1.57
E	254	14709.92	7832.00	253	7876.00	30417.92	48220.08	17802.16	525	50617.00	50.79	18.75	26.79	- 1.33
2-14.0800 SUPERVISORY & ADMINISTRATIVE MANAGEMENT OCCUPATIONS														
A	363	14503.32	4563.00	229	7695.00	26761.32	40114.53	13353.21	571	37648.22	42.86	14.26	27.24	1.67
B	386	17949.00	8106.00	66	2079.00	28134.00	34890.38	6756.38	590	41904.00	30.13	5.83	19.71	- 3.96
C	10	465.00	90.00	10	382.50	937.50	1519.32	581.82	20	1492.50	50.64	19.39	25.32	.45
D	1441	62480.50	20155.00	913	23563.00	106198.50	143697.82	37499.32	2135	145848.50	35.65	9.30	24.05	- .36
E	13	537.16	286.00	11	242.00	1065.16	1354.25	289.09	25	1825.00	39.07	8.34	20.31	- 7.06

College	Enrollment	Jr. College Reim.	Tuition	Voc. En.	Voc. Ed. Reim.	Total Revenue	Total Cost	Local Dis. Cost	Max. En.	Max. Revenue	Student Credit Hour Costs Mid-Term Total	Mid-Term Loc. Dis.	Maximum Total	Maximum Loc. Dis.
2-14.0900 TYPING & RELATED OCCUPATIONS														
B	209	9718.50	4389.00	87	2740.50	16848.00	20324.26	3476.26	325	24678.00	32.42	5.54	20.85	- 4.47
C	87	4045.50	783.00	67	2119.50	6948.00	11795.25	4847.25	168	11443.50	45.19	18.57	23.40	.70
E	245	10123.40	5390.00	241	5302.00	20815.40	27887.45	7072.05	425	32213.00	42.68	10.82	24.60	- 3.82
2-14.9900 OFFICE OCCUPATIONS, OTHER														
A	18	1487.52	468.00	28	2016.00	3971.52	4246.24	274.72	40	6361.60	44.23	2.86	19.90	- 9.91
B	952	44268.00	19992.00	2	63.00	64323.00	90857.07	26534.07	1159	78295.50	31.81	9.29	26.13	3.61
2-16.0103 ARCHITECTURAL TECHNOLOGY (BUILDING CONSTRUCTION)														
A	224	9255.68	2912.00	216	7776.00	19943.68	33557.04	13613.36	380	28273.60	56.18	22.79	33.11	5.23
D	241	9811.50	3165.00	234	5996.25	18972.75	33598.71	14625.96	312	22724.25	53.08	23.10	41.17	13.33
2-16.0104 AUTOMOTIVE TECHNOLOGY														
B	142	7905.00	3570.00	141	5344.50	16819.50	27172.74	10353.24	150	17269.50	53.28	20.30	51.27	18.68
C	58	4092.00	792.00	59	3429.75	8313.75	11745.98	3432.23	100	11754.75	44.49	13.00	26.10	.02
D	116	5316.50	1715.00	116	3344.25	10375.75	31725.88	21350.13	172	13758.25	92.50	62.24	62.45	35.37
2-16.0105 CHEMICAL TECHNOLOGY														
D	40	1968.50	635.00	39	1209.00	3812.50	13203.34	9390.84	168	12033.00	103.96	73.94	25.01	2.22
2-16.0106 CIVIL TECHNOLOGY														
A	74	3057.68	962.00	32	1152.00	5171.68	14791.64	9619.96	140	8756.80	74.96	48.75	39.62	16.17
D	60	2371.50	765.00	56	1413.75	4550.25	10367.71	5817.46	120	7973.75	67.76	38.02	32.40	7.48
E	38	1570.16	836.00	39	858.00	3264.16	8608.74	5344.58	60	4657.20	37.75	52.74	23.75	24.70

											Student Credit Hour Costs Mid-Term		Maximum	
College	Enrollment	Jr. College Reim.	Tuition	Voc. En.	Voc. Ed. Reim.	Total Revenue	Total Cost	Local Dis. Cost	Max. En.	Max. Revenue	Total	Loc. Dis.	Total	Loc. Dis.
2-16.0107 ELECTRICAL TECHNOLOGY														
A	64	2644.48	832.00	44	922.00	4398.48	6642.83	2244.35	60	4181.20	38.92	13.15	41.52	15.38
B	25	1550.00	700.00			2250.00	3434.49	1184.49	56	5040.00	34.34	11.84	15.33	- 7.17
2-16.0108 ELECTRONIC TECHNOLOGY														
A	189	7892.12	2483.00	156	5679.00	16054.12	35566.16	19512.04	372	25851.96	69.83	38.31	35.28	9.64
B	112	6835.50	3087.00	86	3538.50	13461.00	25497.88	12036.88	280	28108.50	57.82	27.29	23.35	- 2.39
C	15	930.00	180.00	15	765.00	1875.00	2754.88	879.88	25	2615.00	45.91	14.66	27.55	1.39
D	186	10788.00	3480.00	184	6708.00	20976.00	56516.57	35540.57	324	32538.00	81.20	51.06	44.85	19.03
E	296	11094.42	5907.00	305	6710.00	23711.42	51818.13	28106.71	500	34434.00	72.37	39.25	43.18	14.49
2-16.0111 INDUSTRIAL TECHNOLOGY														
A	97	4008.04	1261.00	61	2196.00	7465.04	12907.61	5442.57	158	10634.56	49.90	21.04	30.63	5.40
D	12	558.00	180.00	12	351.00	1089.00	5087.19	3998.19	60	4041.00	141.31	111.06	28.26	5.81
2														
2-16.0112 INSTRUMENTATION TECHNOLOGY														
E	103	5412.92	2882.00	74	2288.00	10582.92	18968.29	8385.37	210	18126.60	54.30	24.00	27.89	1.24
2-16.0113 MECHANICAL TECHNOLOGY														
A	85	3512.20	1105.00	105	3780.00	8397.20	13674.00	5276.80	165	12742.80	60.33	23.28	31.08	2.12
B	311	18414.00	8316.00	218	8935.50	35665.50	55412.96	19747.46	383	40480.50	46.64	10.45	39.52	10.65
D	464	20351.50	6565.00	439	12170.00	39087.00	91730.80	52643.80	817	58808.75	69.86	40.09	38.49	13.82
E	53	2189.96	1166.00	60	1320.00	4675.96	15661.67	10985.71	180	12475.60	110.83	77.74	32.63	6.64
2-16.0115 NUCLEAR TECHNOLOGY														
A	93	3842.76	1209.00			5051.76	14893.68	9841.92	159	8636.88	60.06	39.68	35.13	14.76

College	Enrollment	Jr. College Reim.	Tuition	Voc. En.	Voc. Ed. Reim.	Total Revenue	Total Cost	Local Dis. Cost	Max. En.	Max. Revenue	Student Credit Hour Costs Mid-Term Total	Student Credit Hour Costs Mid-Term Loc. Dis.	Student Credit Hour Costs Maximum Total	Student Credit Hour Costs Maximum Loc. Dis.
2-16.0199 ENGINEERING RELATED TECHNOLOGY, OTHER														
D	92	4278.00	1380.00	33	965.25	6623.25	14755.05	8131.80	153	10374.75	53.46	29.46	32.15	9.54
E	128	5288.96	2816.00	133	2926.00	11030.96	20302.68	9271.72	180	14323.60	59.48	27.16	42.30	11.89
2-16.0699 MISCELLANEOUS TECHNICAL EDUCATION, OTHER														
A	378	13883.52	4368.00	42	459.00	18710.52	40235.06	21524.54	618	30147.60	44.90	24.02	27.18	6.82
D	1022	55381.50	17865.00	188	2174.25	75420.75	135462.05	60041.30	1524	111644.25	37.91	16.80	25.37	4.46
E	8	330.56	176.00	6	132.00	638.56	2291.15	1652.59	24	1651.68	107.41	77.47	35.80	10.00
2-17.0100 AIR CONDITIONING														
C	37	2294.00	444.00	38	1938.00	4676.00	7953.93	3277.93	50	5638.00	53.74	22.14	39.77	11.58
2-17.0300 AUTOMOTIVE SERVICES														
E	17	702.44	374.00	9	198.00	1274.44	2141.60	867.16	23	1654.36	47.25	19.13	34.92	7.94
2-17.0302 AUTO MECHANICS														
A	114	9049.08	2847.00	102	6984.00	18880.08	34082.10	15202.02	200	27553.60	58.36	26.03	33.63	6.44
D	117	9672.00	3120.00	116	5884.75	18676.75	32597.86	13921.11	168	22394.50	52.24	22.30	39.66	12.41
E	289	12519.96	6666.00	293	6754.00	25939.96	52755.27	26815.31	576	50824.72	65.29	33.19	28.42	1.04
2-17.0700 COMMERCIAL ART OCCUPATIONS														
D	116	5394.00	1740.00	112	3276.00	10410.00	16421.13	6011.13	192	15054.75	47.19	17.27	28.51	2.37
2-17.1001 CARPENTRY														
D	217	6169.00	1990.00	244	3737.50	11896.50	11775.93	- 120.57	286	14110.50	29.59	- .30	23.27	- 4.61

College	Enrollment	Jr. College Reim.	Tuition	Voc. En.	Voc. Ed. Reim.	Total Revenue	Total Cost	Local Dis. Cost	Max. En.	Max. Revenue	Student Credit Hour Costs Mid-Term Total	Student Credit Hour Costs Mid-Term Loc. Dis.	Student Credit Hour Costs Maximum Total	Student Credit Hour Costs Maximum Loc. Dis.
2-17.1004 MASONRY														
A	25	1033.00	325.00	30	1080.00	2438.00	7917.19	5479.19	75	5154.00	118.76	82.19	39.58	13.81
D	30	1162.50	375.00	30	731.25	2268.75	2355.16	86.41	48	3191.25	31.40	1.15	19.63	- 6.97
E	5	206.60	110.00	5	110.00	426.60	2477.43	2050.83	24	1629.68	185.85	153.85	38.71	13.25
2-17.1300 DRAFTING														
C	22	1364.00	264.00	22	1122.00	2750.00	5148.14	2398.14	50	4822.00	58.50	27.25	25.74	1.63
E	39	1611.48	858.00	35	770.00	3239.48	8529.36	5289.88	80	5835.60	82.02	50.87	39.98	12.63
2-17.1500 ELECTRONIC OCCUPATIONS														
D	114	8447.50	2725.00	111	5196.75	16369.25	26552.50	10183.25	198	20322.00	48.72	18.68	29.50	6.92
2-17.1503 RADIO/TELEVISION REPAIR														
A	19	785.08	247.00	19	684.00	1716.08	6638.40	4922.32	85	5301.20	87.34	64.76	29.29	5.90
E	75	3099.00	1650.00	62	1364.00	6113.00	11898.47	5785.47	120	8962.40	59.49	28.93	37.18	9.18
2-17.2100 INSTRUMENT MAINTENANCE & REPAIR														
E	12	991.68	528.00	14	616.00	2135.68	7510.46	5374.78	75	9982.00	117.36	83.99	18.77	6.18
2-17.2302 MACHINE SHOP														
A	57	4173.32	1313.00	28	2016.00	7502.32	14643.81	7141.49	113	16357.52	54.37	269.38	26.02	- 3.05
D	79	2790.00	900.00	58	1345.50	5035.50	6519.31	1483.81	80	5240.50	36.22	8.24	34.31	6.73
2-17.2306 WELDING & CUTTING														
A	67	2975.04	936.00	65	2340.00	6251.04	9935.81	3684.77	141	10544.24	51.75	19.19	23.73	- 1.45

College	Enrollment	Jr. College Reim.	Tuition	Voc. En.	Voc. Ed. Reim.	Total Revenue	Total Cost	Local Dis. Cost	Max. En.	Max. Revenue	Student Credit Hour Costs Mid-Term Total	Mid-Term Loc. Dis.	Maximum Total	Maximum Loc. Dis.
2-17.2306 WELDING & CUTTING (cont.)														
C	16	496.00	96.00	16	408.00	1000.00	1445.41	445.41	20	1148.00	45.17	13.91	36.14	7.43
E	91	3760.12	2002.00	93	2046.00	7808.12	14440.80	6632.68	162	12303.84	59.51	27.33	33.43	4.95
2-17.2602 COSMETOLOGY														
A	49	6074.04	1911.00	31	3348.00	11333.04	27737.26	16404.22	110	19977.60	70.76	41.85	31.52	8.80
2-17.2802 LAW ENFORCEMENT TRAINING														
B	388	18042.00	8148.00	176	5544.00	31734.00	36292.46	4558.46	660	50094.00	31.18	3.91	18.33	- 6.97
D	255	12446.50	4015.00	245	7536.75	23998.25	37334.84	13336.59	525	39962.25	46.49	16.60	22.83	- 1.61
2-17.3000 REFRIGERATION														
E	23	950.36	506.00	7	154.00	1610.36	3381.66	1771.30	40	2686.80	55.14	28.88	31.70	6.52
2-17.3100 SMALL ENGINE REPAIR - INTERNAL COMBUSTION														
E	83	3429.56	1826.00	82	1804.00	7059.56	11688.87	4629.31	100	8136.00	52.81	20.91	43.83	13.32
2-17.9900 TRADE & INDUSTRIAL OCCUPATIONS, OTHER														
D	41	1906.50	615.00			2521.50	3582.07	1060.57	60	3690.00	29.12	8.62	19.90	- .60
2-30.0000 GENERAL EDUCATION														
A	61	2520.52	793.00	5	180.00	3493.52	6734.27	3240.76	105	5703.60	41.40	19.92	24.05	3.68
B	218	6851.00	3094.00	35	1102.50	11047.50	15427.62	4380.12	370	17977.50	34.00	9.90	20.57	3.43
C	47	2185.50	423.00			2608.50	6755.46	4146.96	102	5661.00	47.91	29.41	22.08	3.58
E	2090	86358.80	45980.00	325	7150.00	139488.80	232202.06	92713.39	3407	222771.24	41.66	16.63	25.56	1.04

GENERAL STUDIES

College	Enrollment	Jr. College Reim.	Tuition	Voc. En.	Voc. Ed. Reim.	Total Revenue	Total Cost	Local Dis. Cost	Max. En.	Max. Revenue	Student Credit Hour Costs Mid-Term Total	Mid-Term Loc. Dis.	Maximum Total	Maximum Loc. Dis.
3030100 BIOLOGICAL SCIENCE														
A	7	289.24	91.00			380.24	1131.72	751.48	24	1303.68	60.64	40.27	17.68	- 2.69
3030200 MATHEMATICAL SCIENCE														
A	156	6445.92	2028.00			8473.92	18567.60	10093.68	345	18740.40	44.63	24.26	20.18	- .18
B	190	8835.00	3990.00			12825.00	26030.78	13205.78	258	17415.00	45.67	23.16	33.63	11.13
D	534	38920.50	12555.00			51475.50	89561.80	38086.30	750	72570.00	35.67	15.16	25.30	5.65
E	149	6156.68	3278.00			9434.68	17481.64	8046.96	360	22795.20	44.00	20.25	18.21	5.54
3030400 SOCIAL SCIENCE														
D	343	12477.50	4025.00			16502.50	36595.27	20092.77	569	27818.50	45.46	24.95	26.97	6.47
3030500 HUMANITIES														
A	241	9958.12	3133.00			13091.12	23063.15	9972.03	310	16839.20	35.89	15.51	27.90	7.53
3030600 BUSINESS														
D	17	790.50	255.00			1045.00	2651.26	1605.76	60	3690.00	51.99	31.48	14.73	- 5.77
3030700 READING														
A	275	5681.50	1787.50			7469.00	23197.45	15728.45	310	15970.08	63.27	42.90	28.06	8.74
B	321	9176.00	4144.00			13320.00	29922.74	16602.74	400	16425.00	50.55	28.04	40.99	18.49
D	348	8664.50	2795.00			11459.50	43186.51	31727.01	480	15682.50	77.26	56.75	56.45	35.72
E	241	9958.12	5302.00			15260.12	27738.05	12477.93	328	20768.96	43.16	19.41	31.71	7.97

College	Enrollment	Jr. College Reim.	Tuition	Voc. En.	Voc. Ed. Reim.	Total Revenue	Total Cost	Local Dis. Cost	Max. En.	Max. Revenue	Student Credit Hour Costs			
											Mid-Term		Maximum	
											Total	Loc. Dis.	Total	Loc. Dis.
3030800 ENGLISH														
A	592	24461.44	7696.00	10	360.00	32517.44	64441.01	31923.57	825	44814.00	40.82	20.22	29.29	8.92
B	182	8463.00	3822.00			12285.00	23097.13	10812.13	220	14850.00	42.30	19.80	35.00	12.50
C	96	4464.00	864.00			5328.00	8198.75	2870.75	112	6216.00	28.47	9.96	24.40	5.90
D	927	43105.50	13905.00			57010.50	114665.83	57655.33	1140	70110.00	41.23	20.73	33.53	13.03
E	178	7354.96	3916.00			11270.96	21634.10	10363.14	330	20895.60	45.58	21.83	24.58	.83
ADULT & CONTINUING EDUCATION														
4040100 AGRICULTURAL SCIENCES														
C	4	124.00	24.00			148.00	1232.68	1084.68	25	925.00	154.09	135.58	24.65	6.14
4040200 BIOLOGICAL SCIENCES														
C	16	744.00	144.00			888.00	1781.04	893.04	28	1554.00	37.11	18.60	21.20	9.21
4040500 SOCIAL SCIENCES														
D	82	1333.00	430.00			1763.00	3204.75	1441.75	198	4776.50	37.26	16.76	13.75	6.75
4040600 HUMANITIES														
B	20	465.00	210.00			675.00	986.08	311.08	48	1620.00	32.87	10.36	13.70	8.81
D	95	3146.50	1015.00			4161.50	7341.86	3180.36	145	5432.50	36.17	15.66	27.71	7.20
4040700 FINE ARTS														
C	248	7688.00	1488.00			9176.00	17733.67	8557.67	240	8880.00	35.75	17.25	36.95	18.44
D	307	5595.50	1805.00			7400.50	9387.48	1986.98	332	7626.00	26.00	5.50	25.24	4.73

College	Enrollment	Jr. College Reim.	Tuition	Voc. En.	Voc. Ed. Reim.	Total Revenue	Total Cost	Local Dis. Cost	Max. En.	Max. Revenue	Student Credit Hour Costs			
											Mid-Term		Maximum	
											Total	Loc. Dis.	Total	Loc. Dis.
4040800 ARCHITECTURE														
D	11	511.50	165.00			676.50	1285.67	609.17	24	1476.00	38.96	18.45	17.86	- 2.65
4040900 BUSINESS														
B	157	5983.00	2702.00	144	4536.00	13221.00	11133.22	- 2087.78	315	20511.00	28.84	- 5.40	15.68	-14.62
C	45	697.50	135.00			832.50	1354.97	522.47	50	925.00	30.11	11.61	27.10	8.58
D	412	7447.75	2402.50	108	423.00	10273.25	13145.14	2871.89	567	13604.50	27.36	5.97	20.44	- .71
4041000 OFFICE OCCUPATIONS														
C	68	1581.00	306.00	40	337.00	2224.00	3379.28	1155.28	100	3112.00	33.13	11.32	22.53	1.78
4041200 HOME ECONOMICS														
C	218	5192.50	1005.00			6197.50	16744.36	10546.86	301	7899.50	49.98	31.48	39.21	20.71
4041300 JOURNALISM														
D	5	77.50	25.00			102.50	279.60	177.10	25	512.50	55.92	35.42	11.18	- 9.32
4041600 HEALTH OCCUPATIONS														
B	37	1720.50	777.00	27	850.50	3348.00	2909.16	- 438.84	70	5575.50	26.21	- 3.95	13.85	-12.70
4041800 ADULT BASIC EDUCATION														
D	32	496.00	160.00			656.00	2231.07	1575.07	30	615.00	69.72	49.22	74.37	53.90

College	Enrollment	Jr. College Reim.	Tuition	Voc. En.	Voc. Ed. Reim.	Total Revenue	Total Cost	Local Dis. Cost	Max. En.	Max. Revenue	Student Credit Hour Costs Mid-Term Total	Student Credit Hour Costs Mid-Term Loc. Dis.	Student Credit Hour Costs Maximum Total	Student Credit Hour Costs Maximum Loc. Dis
4041900 G.E.D. PREPARATORY														
C	64	2976.00	576.00			3552.00	5920.83	2368.83	100	5550.00	30.84	12.33	19.74	1.23
D	110	8525.00	2750.00			11275.00	14265.32	2990.32	80	8200.00	25.94	5.43	35.66	15.16
4042100 TRADES & INDUSTRY														
A	52	2148.64	676.00	84	790.00	3614.64	7125.97	3511.33	60	3545.20	51.40	25.32	44.54	22.38
C	59	1472.50	285.00	52	551.50	2309.00	6201.79	3892.79	123	4177.50	65.28	40.97	31.64	10.33
D	149	8261.50	2665.00			10926.50	13101.09	2174.59	190	12095.00	24.58	4.07	22.21	1.06
4042200 HOBBY & RECREATIONAL														
A	173	5991.40	1885.00	49	482.00	8358.40	15539.32	7180.92	212	10748.48	42.39	18.57	30.84	9.51
B	86	2325.00	1050.00			3375.00	4363.09	988.09	95	3600.00	29.08	6.58	27.26	4.77
C	10	465.00	90.00	10	382.50	937.50	1311.38	373.88	30	2047.50	43.71	12.46	14.57	8.18
D	22	341.00	110.00	21	80.00	531.00	1106.33	575.33	30	695.00	50.29	26.15	36.88	13.70
E	4	165.28	88.00	4	88.00	341.28	936.74	595.46	15	1037.80	87.87	55.85	23.42	- 2.52

APPENDIX K

NUMBER OF SECTIONS OFFERED IN EACH DISCIPLINE BY INSTITUTION

APPENDIX K

NUMBER OF SECTIONS OFFERED IN EACH DISCIPLINE BY INSTITUTION

Discipline	Institution					
	A	B	C	D	E	TOTAL
1001000 - 1001080 AGRICULTURAL SCIENCES	5	2		2	4	13
1002000 - 1002080 BIOLOGICAL SCIENCES	57	113	34	81	38	323
1003000 MATHEMATICAL SCIENCES	43	62	42	76	65	228
1004000 - 1004060 PHYSICAL SCIENCES	34	75	28	97	23	257
1005000 - 1005075 ENGINEERING SCIENCES	2	7	4	7	3	23
1006000 - 1006040 SOCIAL SCIENCES	124	163	85	233	230	835
1007100 - 1007315 ENGLISH	100	123	57	132	113	525
1007400 - 1007540 FOREIGN LANGUAGE	15	28	4	37	38	122
1007600 PHILOSOPHY	8	7	14	2	11	42
1007800 - 1008200 SPEECH	28	39	14	44	12	137
1009110 - 1009200 ART & DESIGN	19	29	13	53	24	138
1009300 DRAMA				12	4	16
1009400 - 1009500 MUSIC	27	43	6	84	14	174
1011000 - 1011900 BUSINESS	103	1	19		75	198
1012000 - 1012600 EDUCATION		20		16		36

NUMBER OF SECTIONS OFFERED IN EACH DISCIPLINE BY INSTITUTION (Cont.)

Discipline	Institution					
	A	B	C	D	E	TOTAL
1013000 - 1013400 HOME ECONOMICS	4	18	2			24
1014000 JOURNALISM		1	2	3	2	8
1020000 - 1020820 EDUCATIONAL SERVICES	217	82	42	38	112	491
2-01.0100 AGRICULTURAL PRODUCTION	2	4	1	20	3	30
2-01.0101 ANIMAL SCIENCE	5		2			7
2-01.0102 PLANT SCIENCE	1		5		5	11
2-01.0104 FARM BUSINESS MANAGEMENT	10	1	1		3	15
2-01.0200 AGRICULTURAL SUPPLIES & SERVICES		6		8	4	18
2-01.0201 AGRICULTURAL CHEMICALS		3			1	4
2-01.0202 FEEDS		3			2	5
2-01.0204 FERTILIZERS (PLANT FOOD)		3	1		1	5
2-01.0300 AGRICULTURAL MECHANICS				17		17
2-01.0301 AGRICULTURAL POWER & MACHINERY	2	4	1		10	17
2-01.0302 AGRICULTURE STRUCTURES & CONVENIENCES			1			1
2-01.0305 AGRICULTURAL MECHANICAL SKILLS	10					10
2-01.0306 AGRICULTURE CONSTRUCTION & MAINTENANCE	8					8

NUMBER OF SECTIONS OFFERED IN EACH DISCIPLINE BY INSTITUTION (Cont.)

Discipline	Institution					
	A	B	C	D	E	TOTAL
2-01.05000 ORNAMENTAL HORTICULTURE		4				4
2-01.0504 LANDSCAPING		2				2
2-01.0602 RECREATION					12	12
2-01.0603 SOIL (AGRICULTURAL RESOURCES)		3				3
2-01.9900 AGRICULTURE, OTHER	23	9			17	49
2-04.0100 ADVERTISING SERVICES		2				2
2-04.0700 FOOD SERVICES (SALES)		2				2
2-04.1700 REAL ESTATE (SALES)	3	5		1		9
2-04.1900 TRANSPORTATION	3	1		6		10
2-04.2000 RETAIL TRADE (OTHER)		1				1
2-07.0101 DENTAL ASSISTING	27		10		14	51
2-07.0102 DENTAL HYGIENE (ASSOCIATE DEGREE)	18				15	31
2-07.0301 NURSING (ASSOCIATE DEGREE)		12		42	17	71
2-07.0302 PRACTICAL (VOCATIONAL) NURSING	22				15	37
2-07.0305 SURGICAL TECHNICIAN				4		4
2-07.0402 PHYSICAL THERAPY ASSISTANT				12		12

NUMBER OF SECTIONS OFFERED IN EACH DISCIPLINE BY INSTITUTION (Cont.)

	Discipline	Institution					
		A	B	C	D	E	TOTAL
2-07.9900	HEALTH OCCUPATIONS, OTHER				7	17	24
2-09.0102	CHILD DEVELOPMENT		4		2	7	13
2-09.0201	CARE AND GUIDANCE OF CHILDREN			3	6		9
2-09.0203	FOOD MANAGEMENT, PRODUCTION & SERVICES				2		2
2-14.0100	ACCOUNTING & COMPUTING	2	40		60		102
2-14.0200	BUSINESS DATA PROCESSING	35	32	13	56	60	196
2-14.0300	FILING, OFFICE MACHINES, GENERAL OFFICE CLERICAL		3	3	2	1	9
2-13.0600	PERSONNEL, TRAINING & OTHER RELATED OCCUPATIONS		16				16
2-14.0700	STENOGRAPHIC, SECRETARIAL & RELATED OCCUPATIONS	7	15	7	69	21	119
2-14.0800	SUPERVISORY & ADMINISTRATIVE MANAGEMENT OCCUPATIONS	21	18	1	58	1	99
2-14.0900	TYPING & RELATED OCCUPATIONS		13	7		17	37
2-14.9900	OFFICE OCCUPATIONS, OTHER	2	38				40
2-16.0103	ARCHITECTURAL TECHNOLOGY	16			14		30
2-16.0104	AUTOMOTIVE TECHNOLOGY		17	4	21		42

NUMBER OF SECTIONS OFFERED IN EACH DISCIPLINE BY INSTITUTION (Cont.)

Discipline		Institution					
		A	B	C	D	E	TOTAL
2-16.0105	CHEMICAL TECHNOLOGY				8		8
2-16.0106	CIVIL TECHNOLOGY	8			6	3	17
2-16.0107	ELECTRICAL TECHNOLOGY	3	2				5
2-16.0108	ELECTRONIC TECHNOLOGY	18	25	1	24	25	93
2-16.0111	INDUSTRIAL TECHNOLOGY	6			3		9
2-16.0112	INSTRUMENTATION TECHNOLOGY					14	14
2-16.0113	MECHANICAL TECHNOLOGY	7	39		45	9	100
2-16.0115	NUCLEAR TECHNOLOGY	6					6
2-16.0199	ENGINEERING RELATED TECHNOLOGY, OTHER				5	9	14
2-16.0699	MISCELLANEOUS TECHNICAL EDUCATION, OTHER	21			66	1	88
2-17.0100	AIR CONDITIONING			2			2
2-17.0300	AUTOMOTIVE SERVICES					1	1
2-17-0302	AUTO MECHANICS	10			14	31	55
2-17.0700	COMMERCIAL ART OCCUPATIONS				8		8
2-17.1001	CARPENTRY				12		12

NUMBER OF SECTIONS OFFERED IN EACH DISCIPLINE BY INSTITUTION (Cont.)

Discipline	Institution					
	A	B	C	D	E	TOTAL
2-17.1004 MASONRY	4			2	1	7
2-17.1300 DRAFTING			2		4	6
2-17.1500 ELECTRONIC OCCUPATIONS				14		14
2-17.1503 RADIO/TELEVISION REPAIR	5				6	11
2-17.2100 INSTRUMENT MAINTENANCE & REPAIR					5	5
2-17.2302 MACHINE SHOP	8			4		12
2-17.2306 WELDING & CUTTING	8		1		9	18
2-17.2602 COSMETOLOGY	7					7
2-17.2802 LAW ENFORCEMENT TRAINING		19		18		37
2-17.3000 REFRIGERATION					2	2
2-17.3100 SMALL ENGINE REPARI					5	5
2-17.9900 TRADE & INDUSTRIAL OCCUPATIONS, OTHER				2		2
2-30.000 GENERAL EDUCATION	3	13	3		133	152
3030100 BIOLOGICAL SCIENCE	1					1
3020200 MATHEMATICAL SCIENCE	10	10		25	12	57
3030400 SOCIAL SCIENCE				27		27

NUMBER OF SECTIONS OFFERED IN EACH DISCIPLINE BY INSTITUTION (Cont.)

Discipline	Institution					
	A	B	C	D	E	TOTAL
3030500 HUMANITIES	12					12
3030600 BUSINESS				2		2
3030700 READING	12	20		32	18	82
3030800 ENGLISH	32	20	4	52	15	123
4040100 AGRICULTURAL SCIENCES	1					1
4040200 BIOLOGICAL SCIENCES	1					1
4040500 SOCIAL SCIENCES				6		6
4040600 HUMANITIES		2		6		8
4040700 FINE ARTS			10	15		25
4040800 ARCHITECTURE					1	1
4040900 BUSINESS		9	2	19		30
4041000 OFFICE OCCUPATIONS			4			4
4041200 HOME ECONOMICS			16			16
4041300 JOURNALISM				1		1
4041600 HEALTH OCCUPATIONS		2				2
4041800 ADULT BASIC EDUCATION				2		2
4041900 G.E.D. PREPARATORY			4	7		11

NUMBER OF SECTIONS OFFERED IN EACH DISCIPLINE BY INSTITUTION (Cont.)

Discipline	Institution					
	A	B	C	D	E	TOTAL
4042100 TRADES & INDUSTRY	3		5	7		15
4042200 HOBBY & RECREATION	9	5	1	1	1	17

VITA

Chester Steven Rzonca was born January 13, 1943 in New Britain, Connecticut. His elementary and secondary education were completed in that city where he graduated from the New Britain Senior High School in June of 1960. He received his Bachelor of Science Degree in Industrial Arts Education from Central Connecticut State College in June of 1965. From November of 1964 to June of 1965, he taught at the Woodrow Wilson Junior High School in Middletown, Connecticut. From September of 1965 to January of 1966 he was employed as a drafting instructor in the West Haven High School, West Haven, Connecticut.

In February of 1966, he began graduate study at Morehead State College, now known as Morehead State University. During 1966-67, he was employed as a graduate assistant in the School of Applied Sciences and Technology and graduated with a Master of Arts Degree in June of 1967.

Mr. Rzonca then taught at Montclair State College (1967-68) in the Department of Industrial Education and Technology and served as a coordinator and instructor of data processing for Southwest Virginia Community College, Richlands, Virginia (1968-69).

In June of 1969 Mr. Rzonca began graduate study at the University of Illinois. From June of 1969 until June of 1970, he was employed as a graduate assistant working with a National Conference for Health Occupations Education. During July and August, he was responsible for a cost study sponsored by the State Division of Vocational and Technical Education. In the fall of 1970 Mr. Rzonca was employed as a graduate assistant in the Department of Vocational and Technical Education. In the following spring, Mr. Rzonca assumed responsibility for this current study sponsored by the

State Division of Vocational and Technical Education.

Mr. Rzonca is currently employed as a Lecturer in Occupational Education, The University of Michigan, Ann Arbor, Michigan.